

Figure 5.1-1
 Portland Harbor RI/FS
 Remedial Investigation Report
 Correlation Plot of Lead and
 Zinc in Surface Sediment

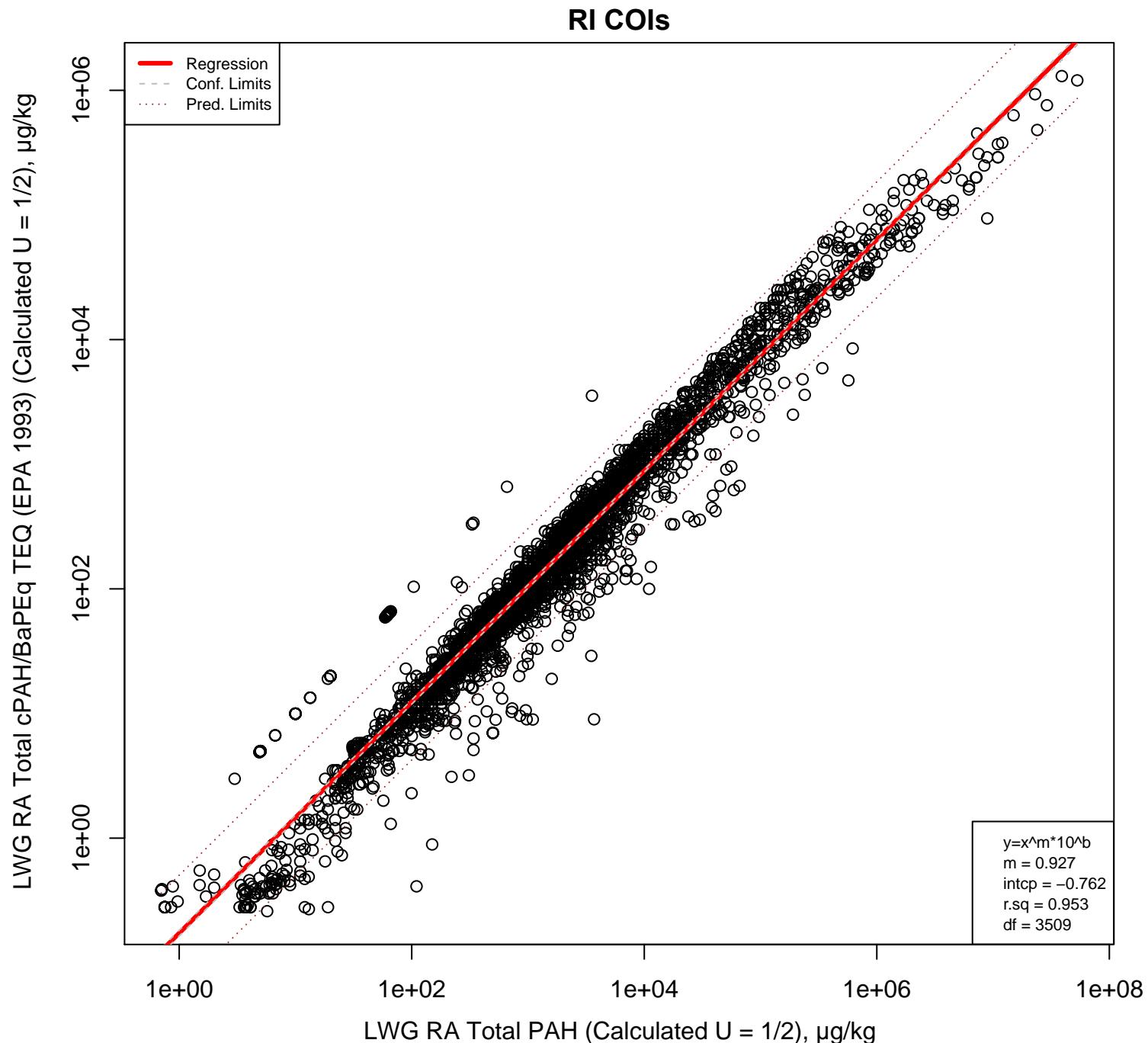


Figure 5.1-2
 Portland Harbor RI/FS
 Remedial Investigation Report
 Correlation Plot of Carcinogenic PAHs and
 Total PAHs in Surface Sediment

RI COIs

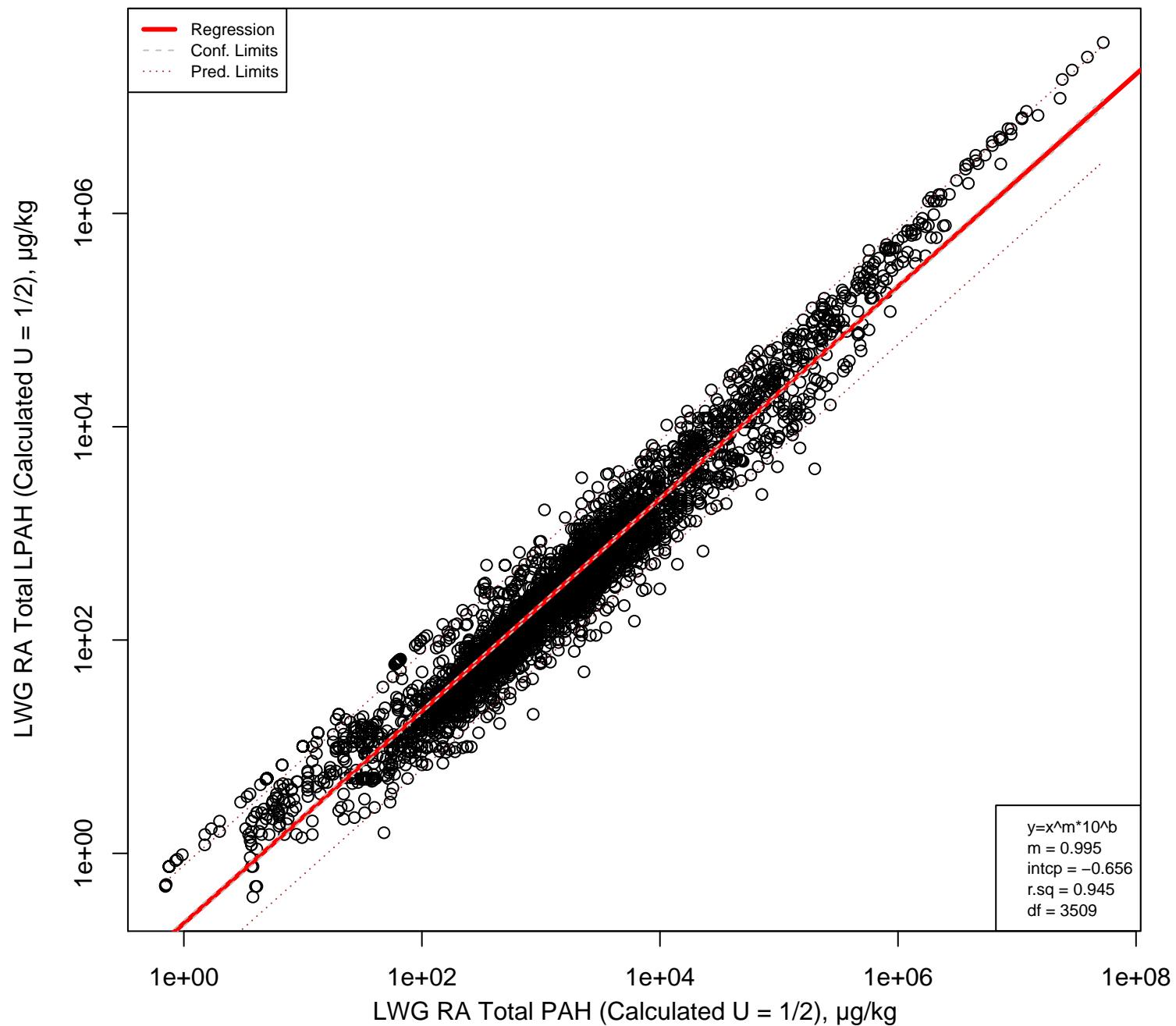


Figure 5.1-3
 Portland Harbor RI/FS
 Remedial Investigation Report
 Correlation Plot of Low Molecular Weight PAHs and
 Total PAHs in Surface Sediment

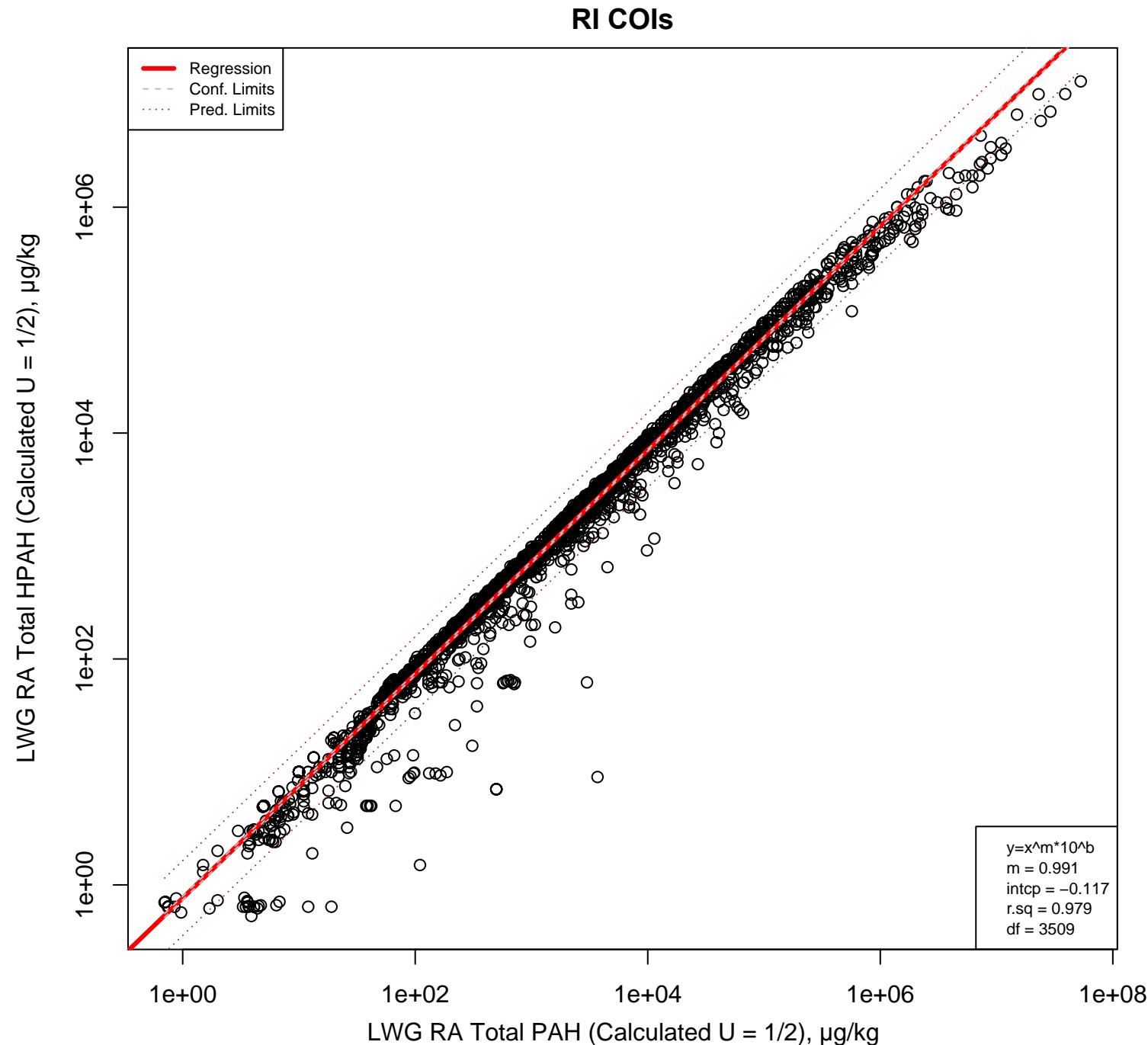


Figure 5.1-4
 Portland Harbor RI/FS
 Remedial Investigation Report
 Correlation Plot of High Molecular Weight PAHs and
 Total PAHs in Surface Sediment

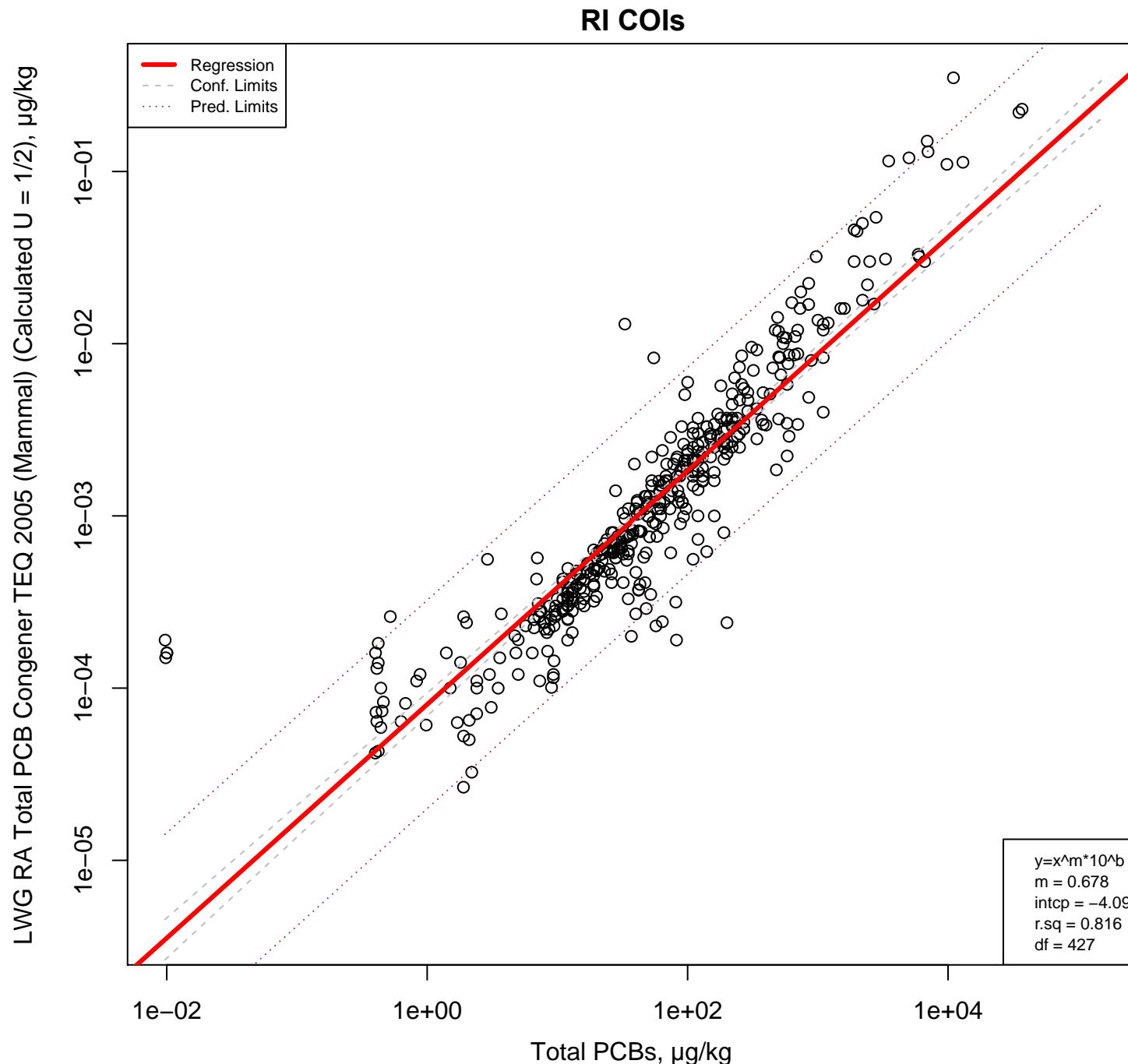
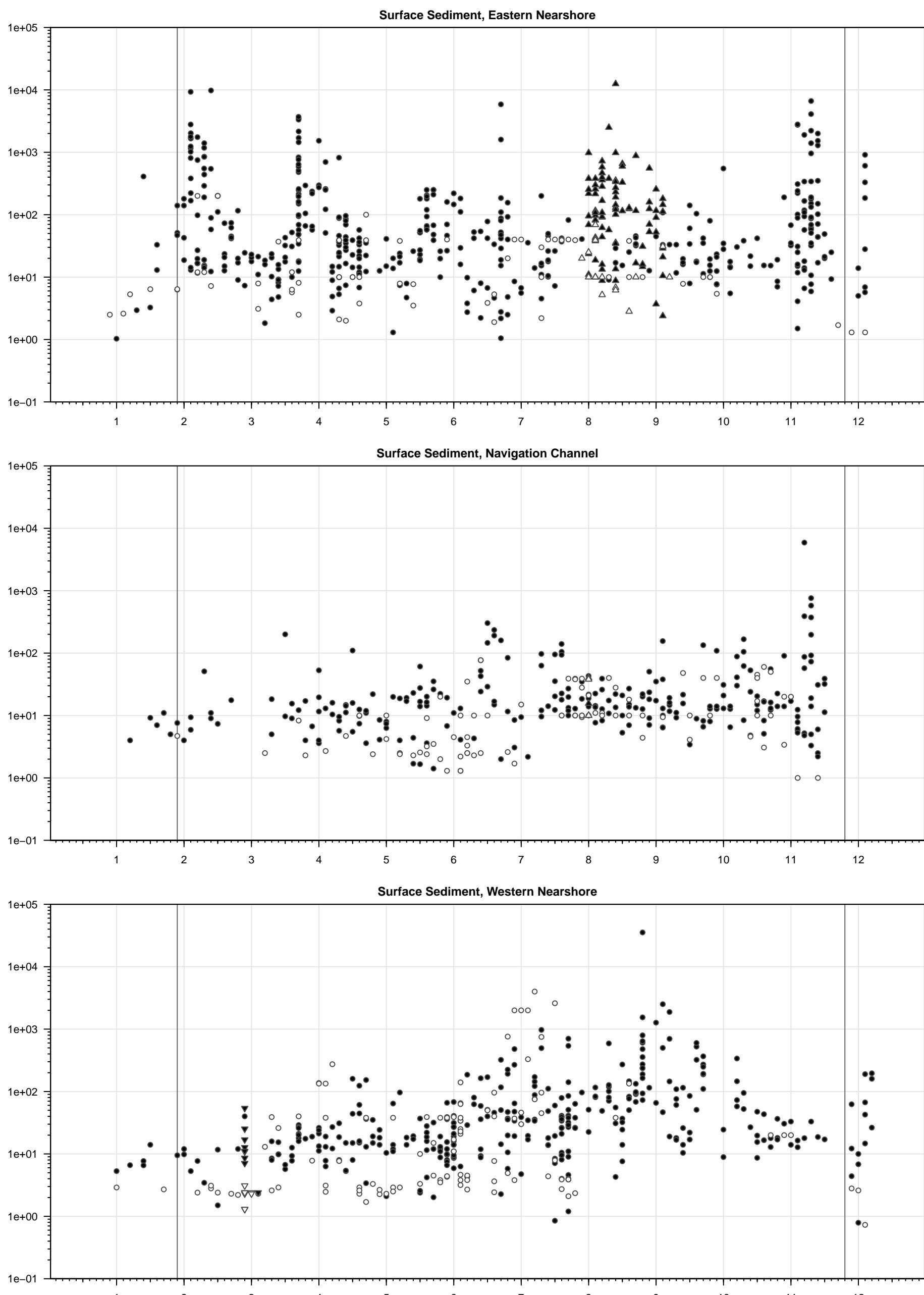


Figure 5.1-5
 Portland Harbor RI/FS
 Remedial Investigation Report
 Correlation Plot of PCB TEQ and
 Total PCBs in Surface Sediment



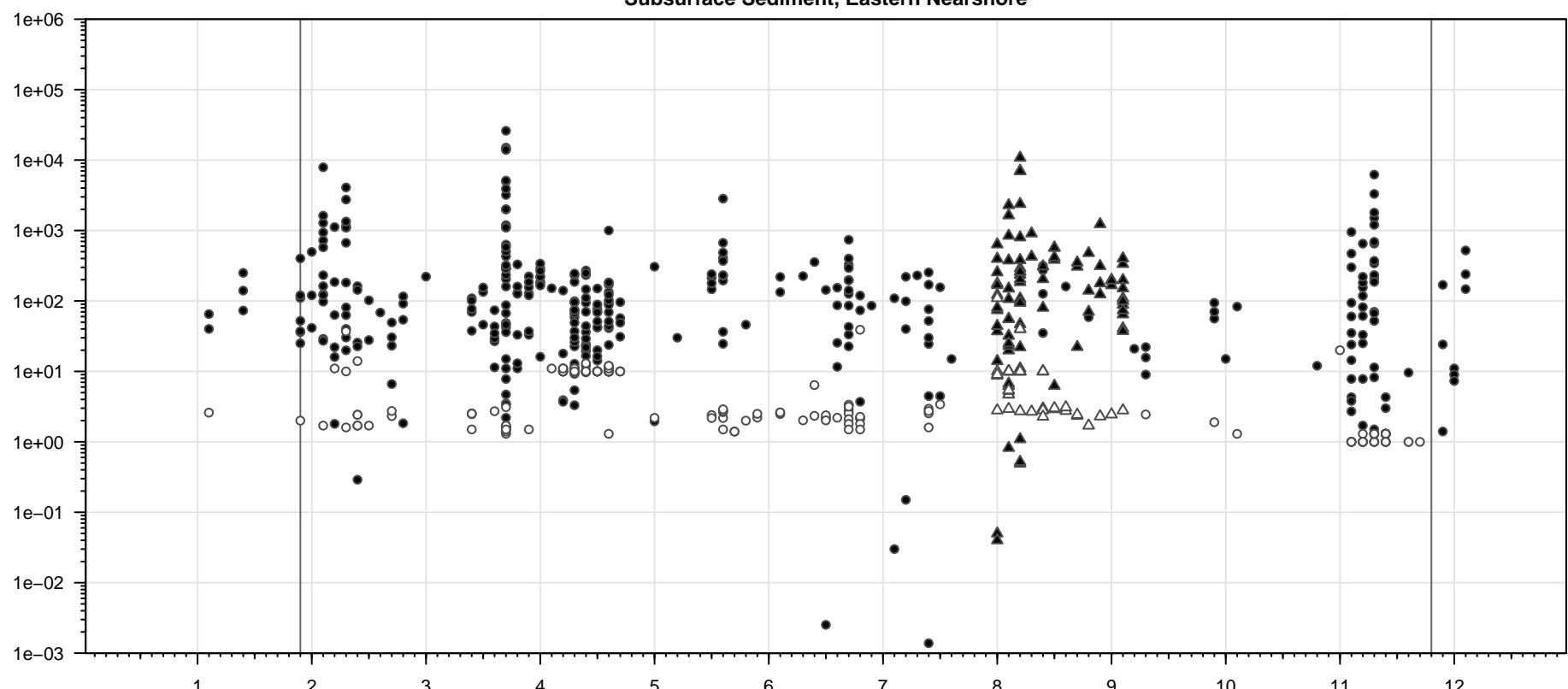
River Mile

● River Bed
▲ Swan Island
▼ Multnomah Channel

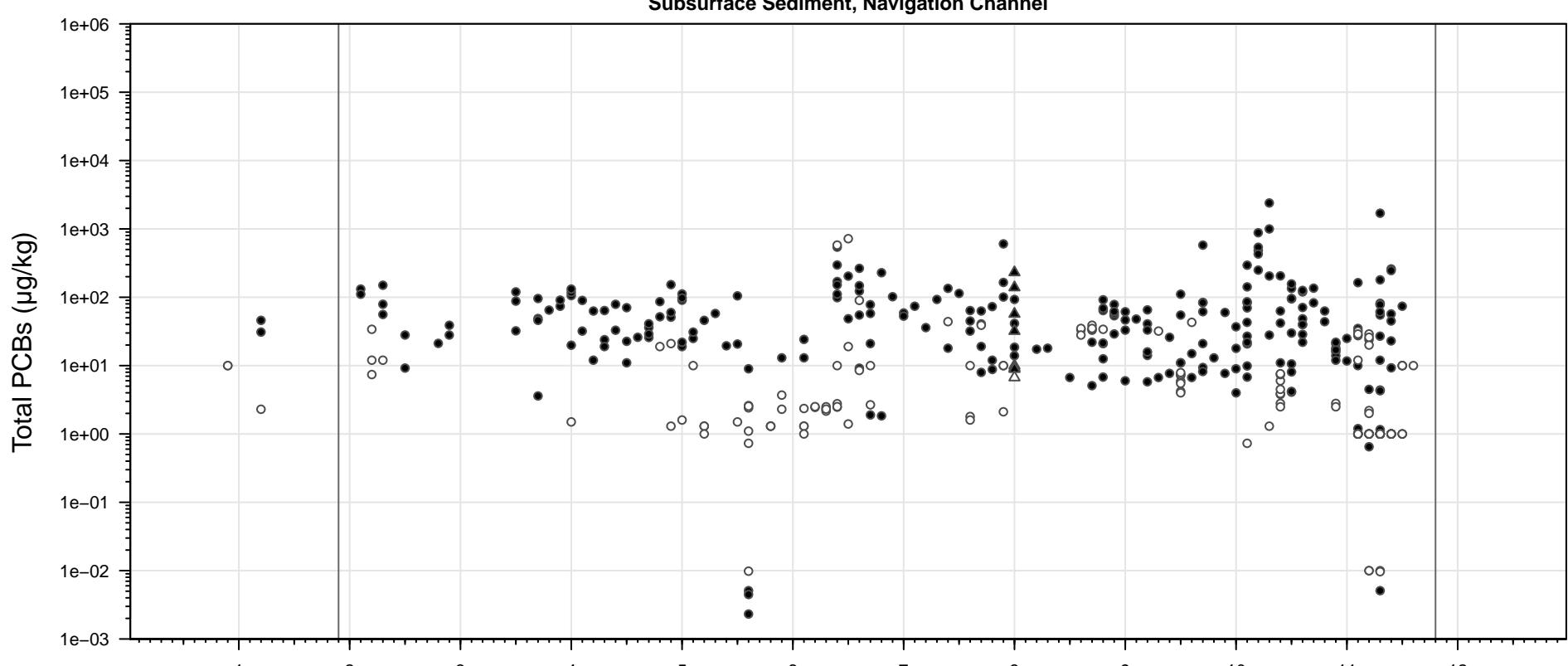
● Detected
○ Non-Detected

Figure 5.2-1
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCBs
Concentrations in Surface Sediment, RM 0.8–12.2

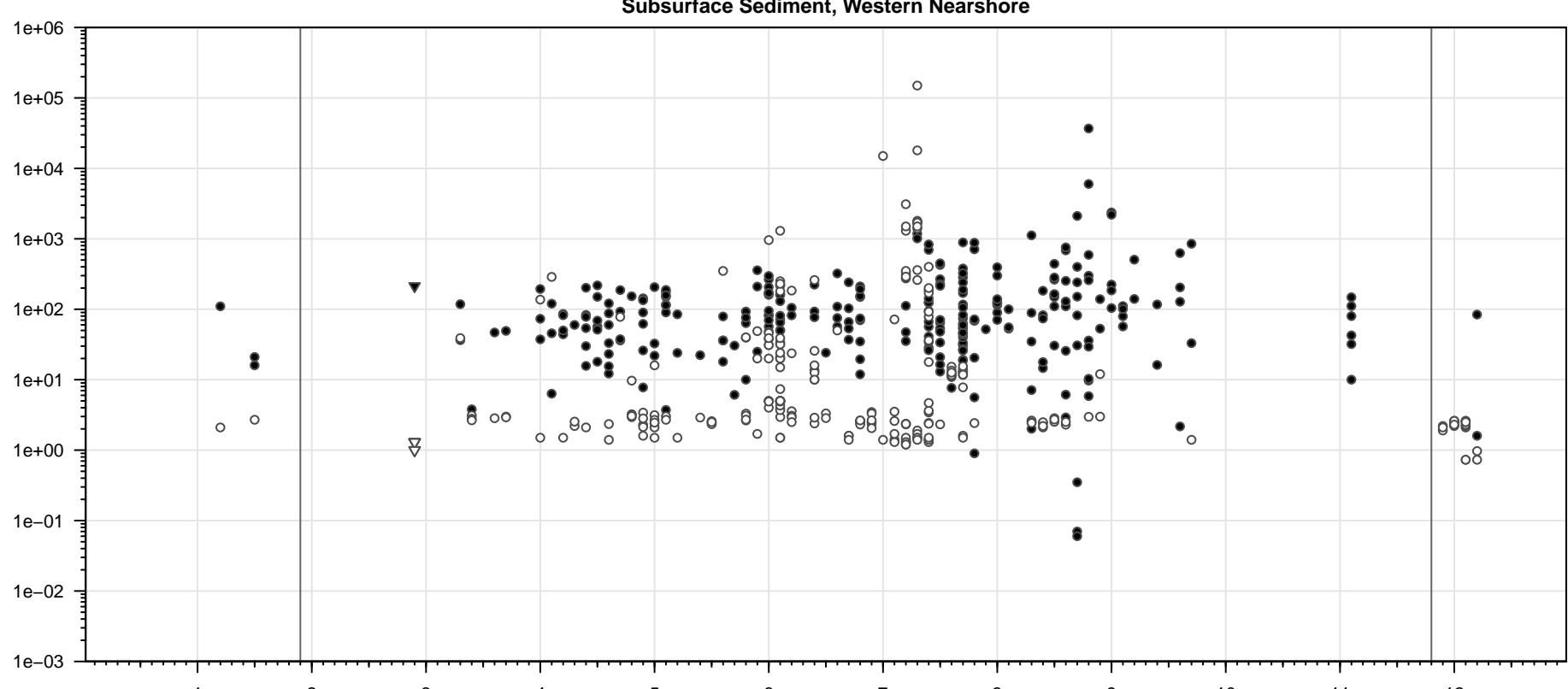
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

- Detected
- Non-Detected

Figure 5.2-2
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCBs
Concentrations in Subsurface Sediment, RM 0.8–12.2

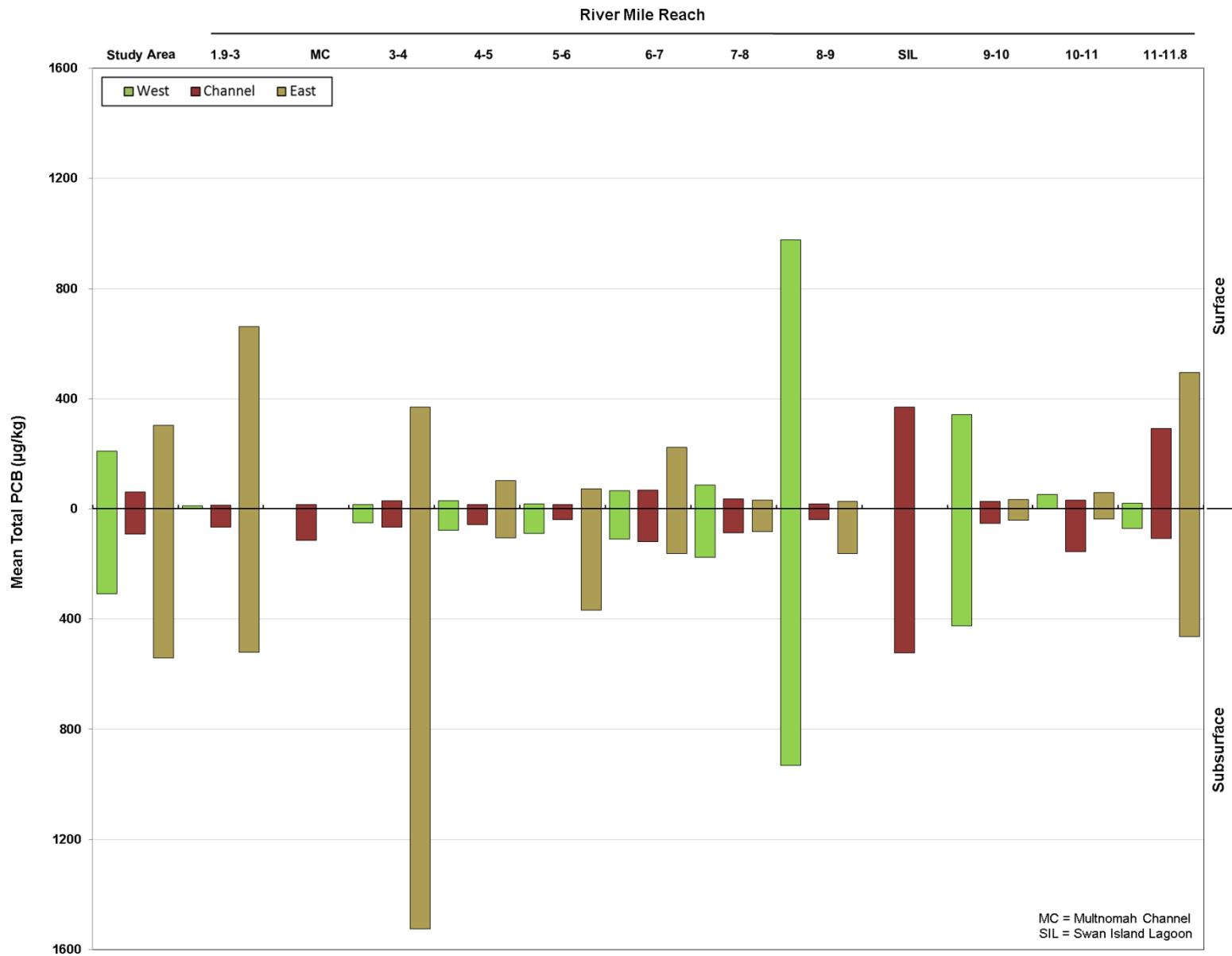
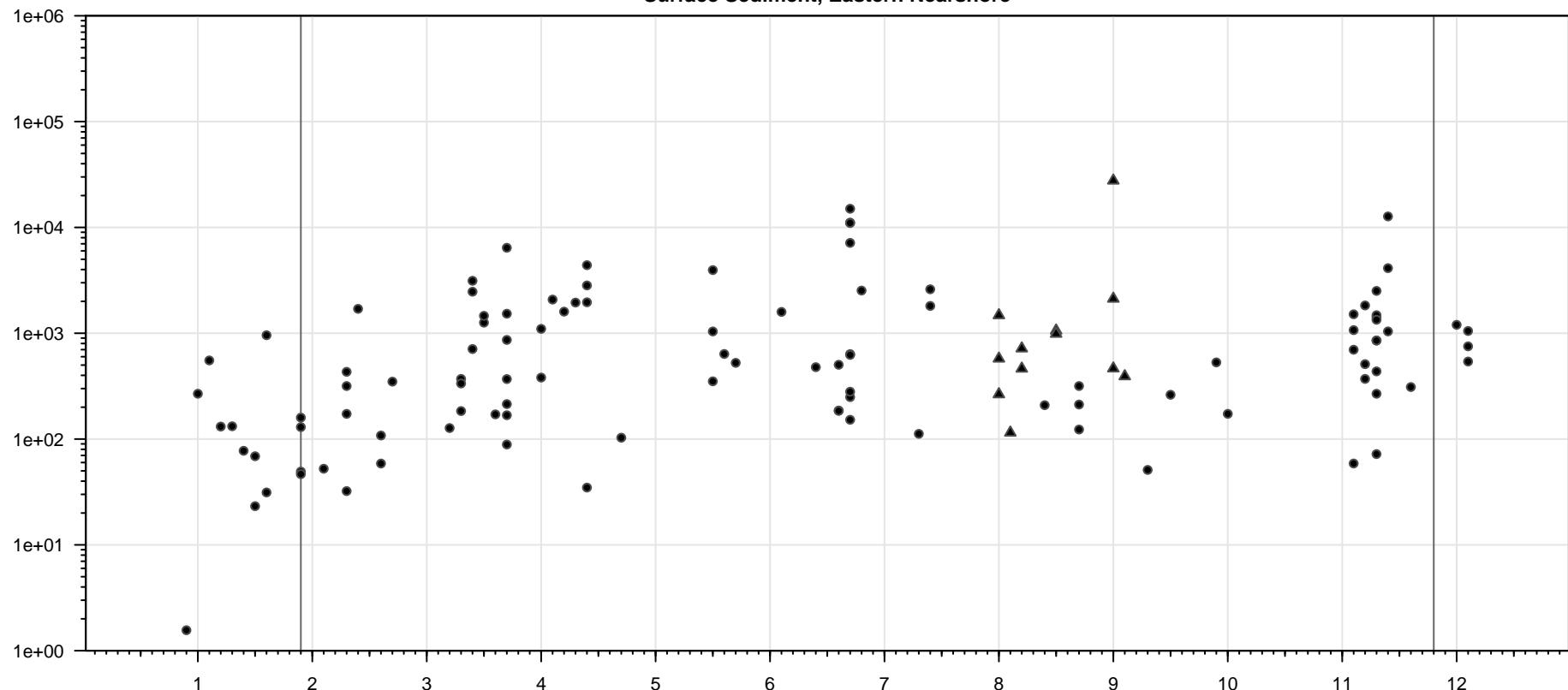
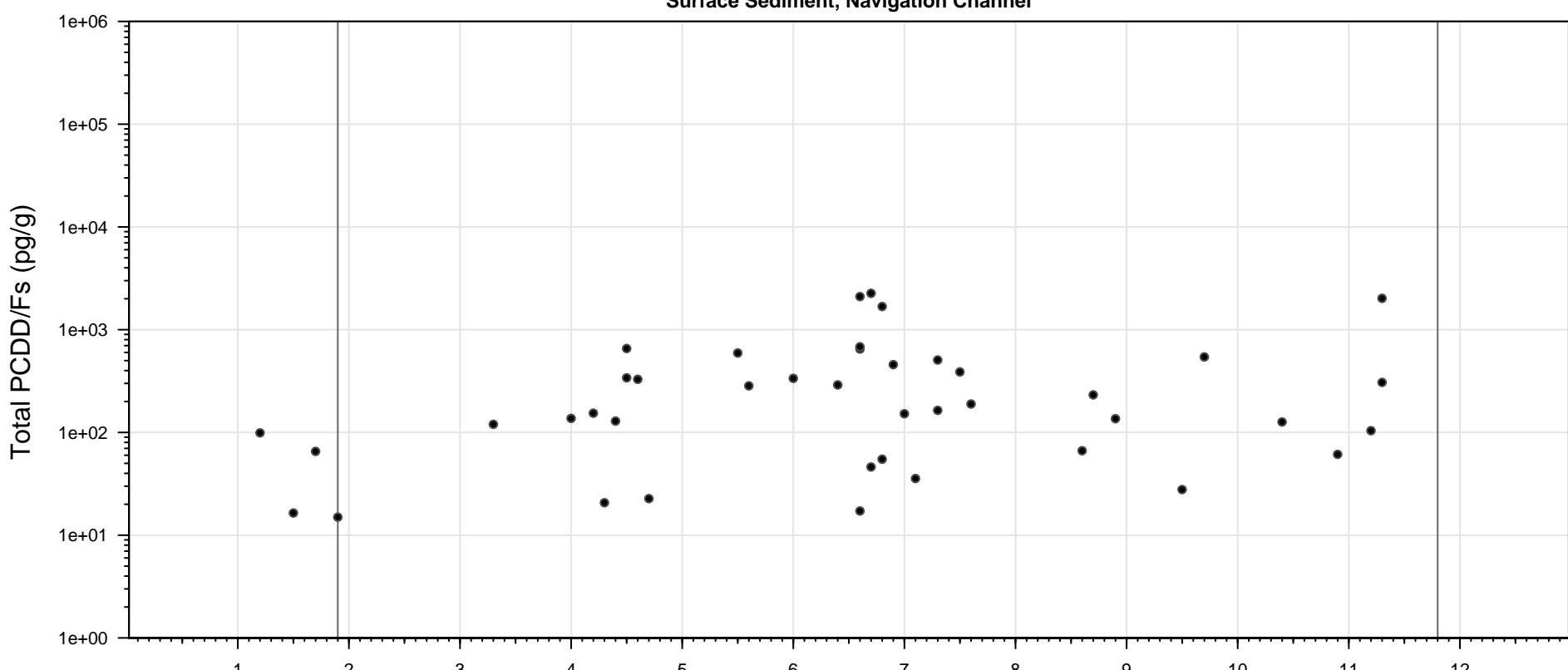


Figure 5.2-3
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total PCBs Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

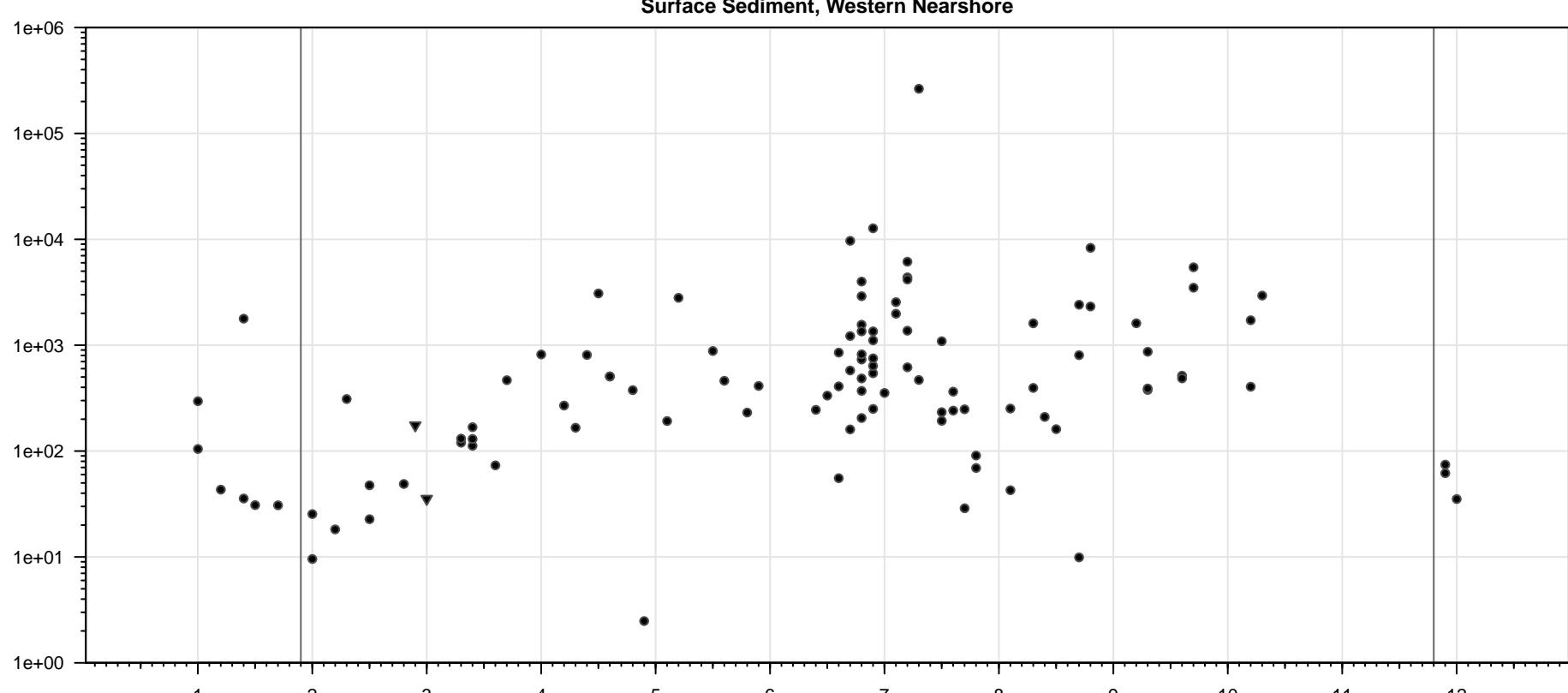
Surface Sediment, Eastern Nearshore



Surface Sediment, Navigation Channel



Surface Sediment, Western Nearshore



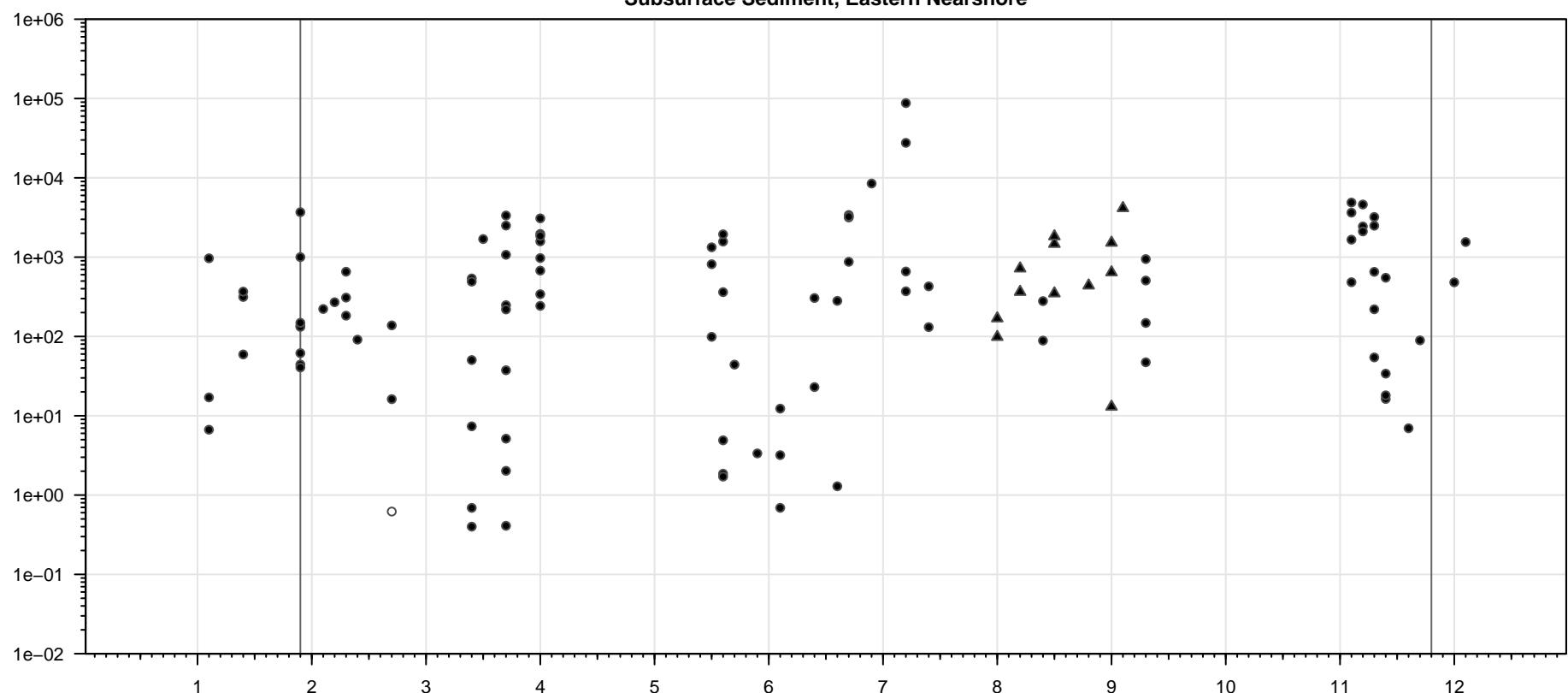
River Mile

● River Bed
▲ Swan Island
▼ Multnomah Channel

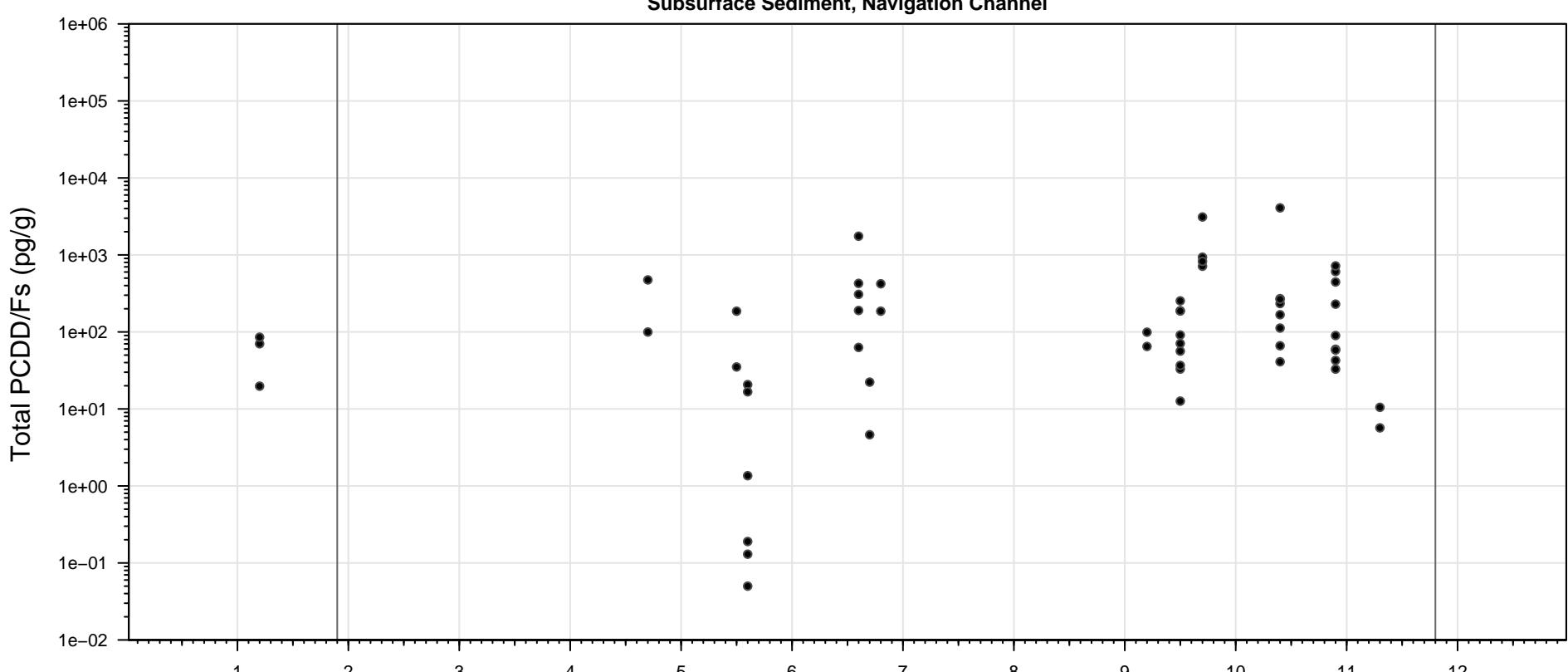
● Detected
○ Non-Detected

Figure 5.2-4
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCDD/Fs
Concentrations in Surface Sediment, RM 0.8–12.2

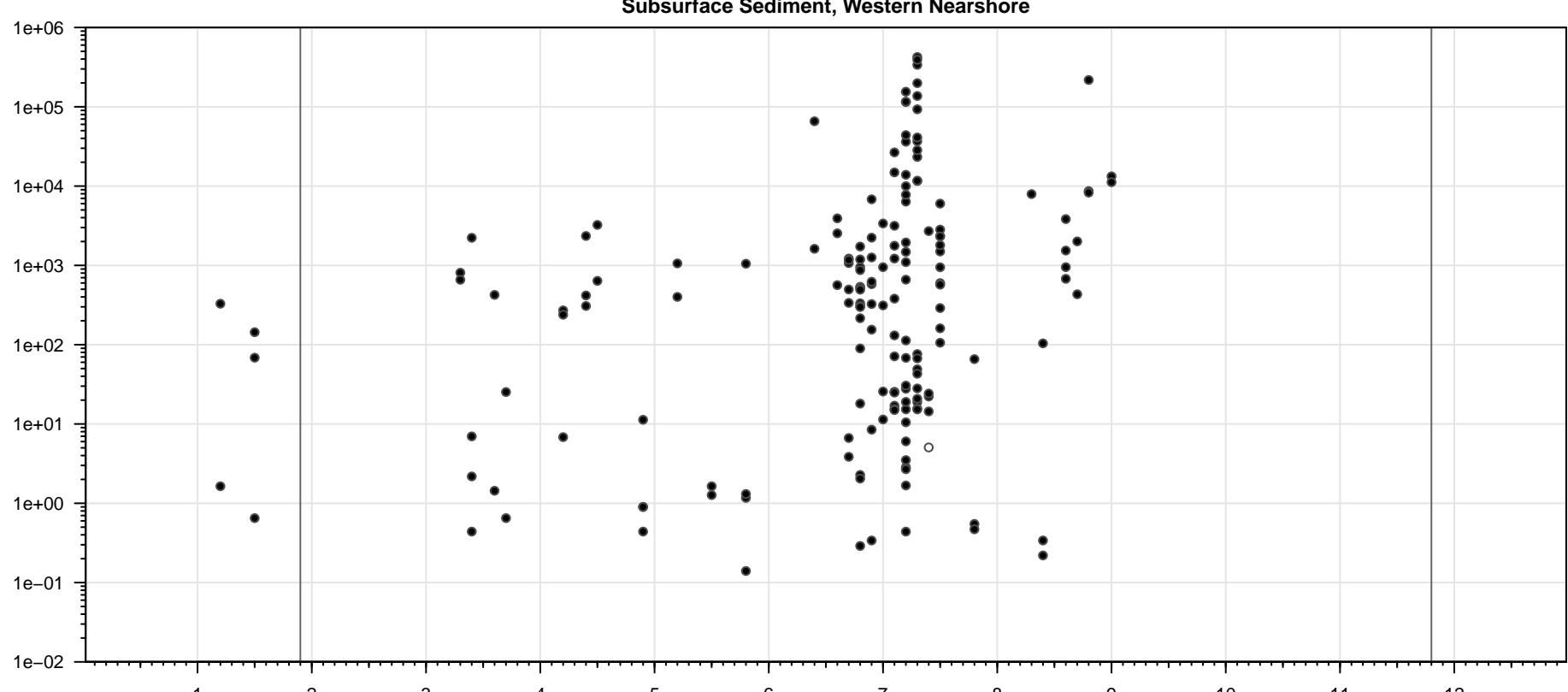
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

- Detected
- Non-Detected

Figure 5.2-5
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCDD/Fs
Concentrations in Subsurface Sediment, RM 0.8–12.2

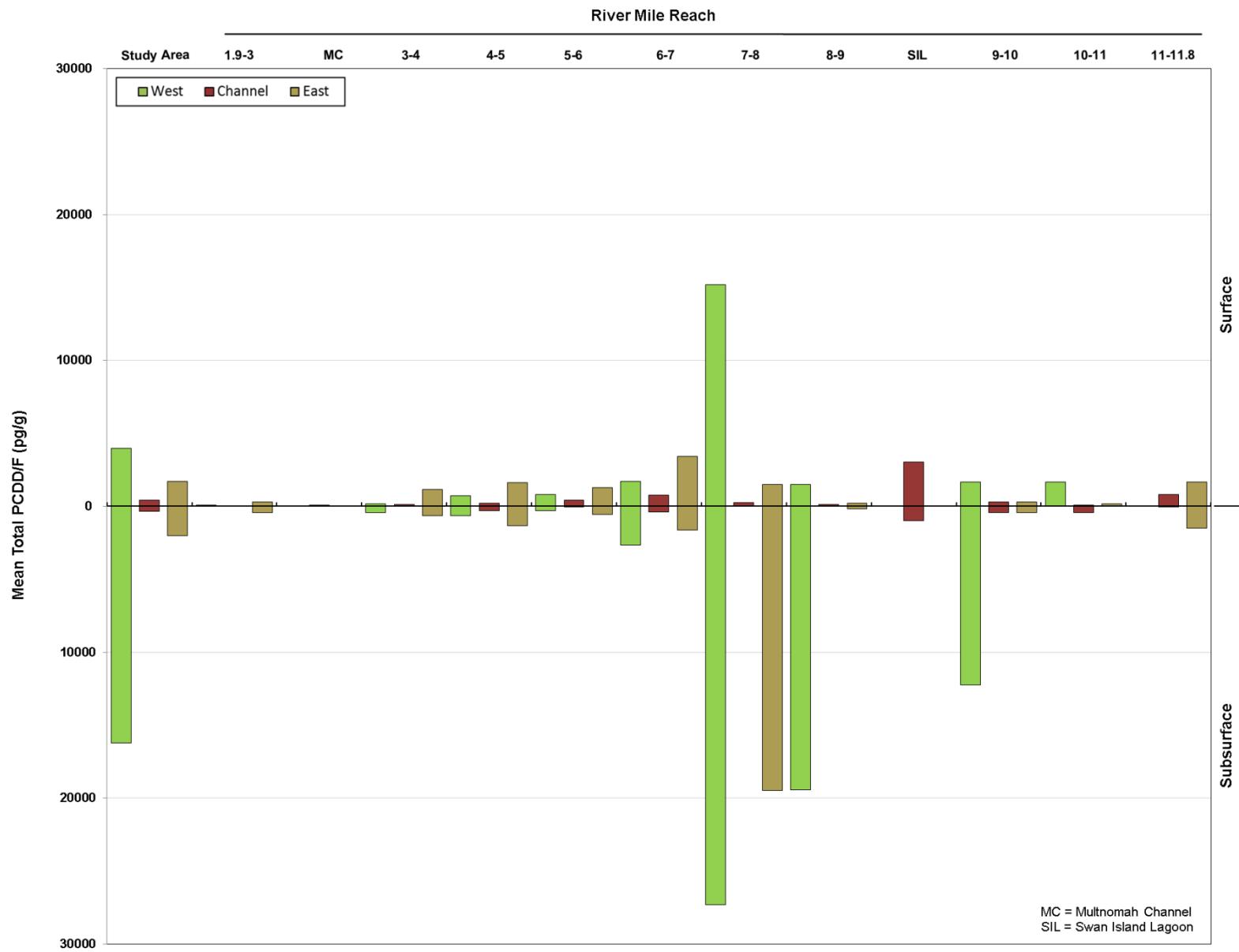
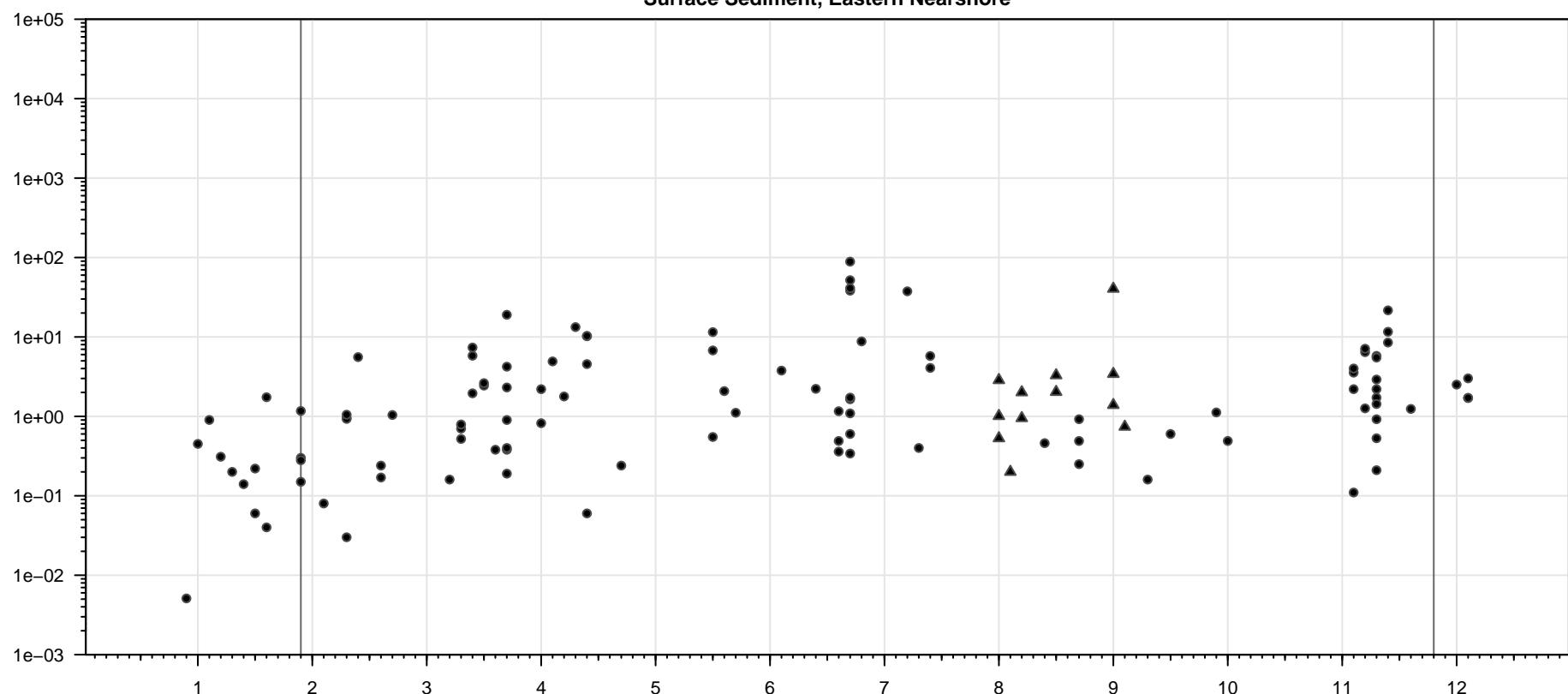
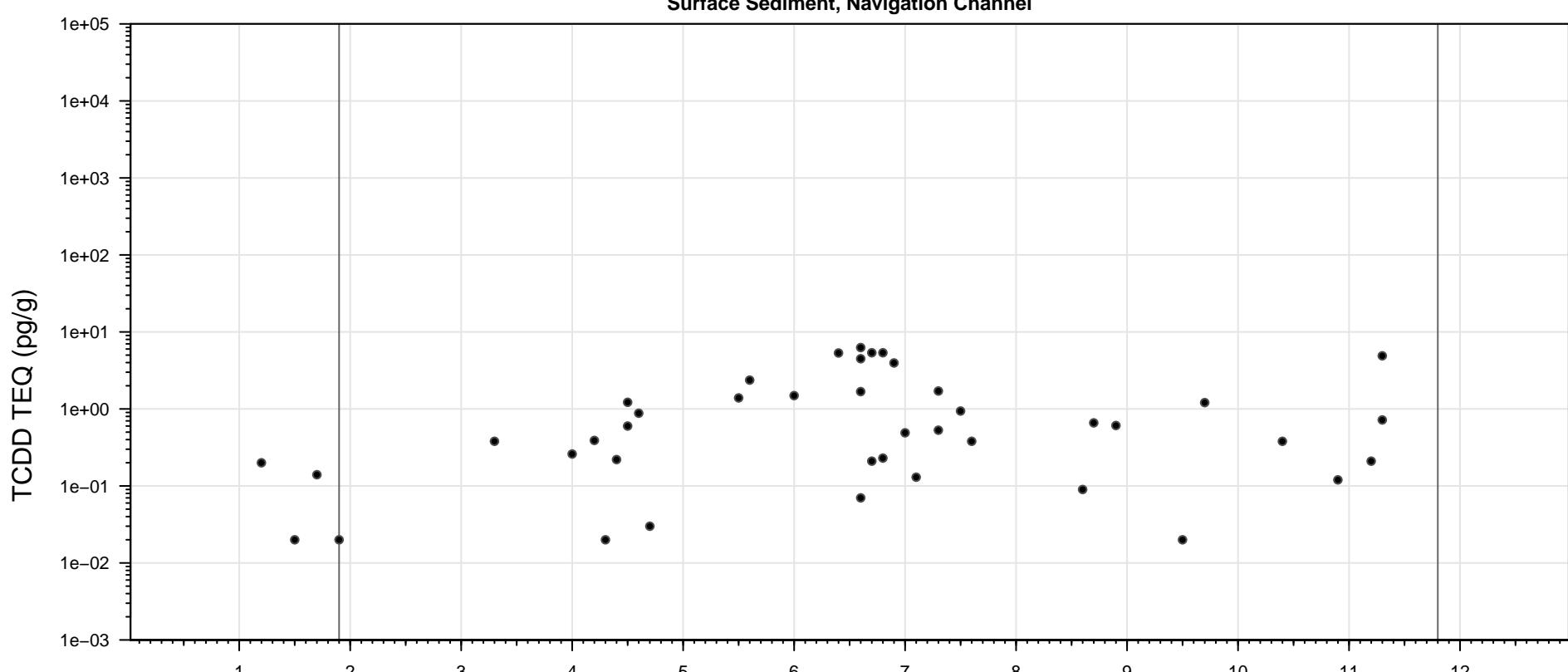


Figure 5.2-6
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total PCDD/Fs Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

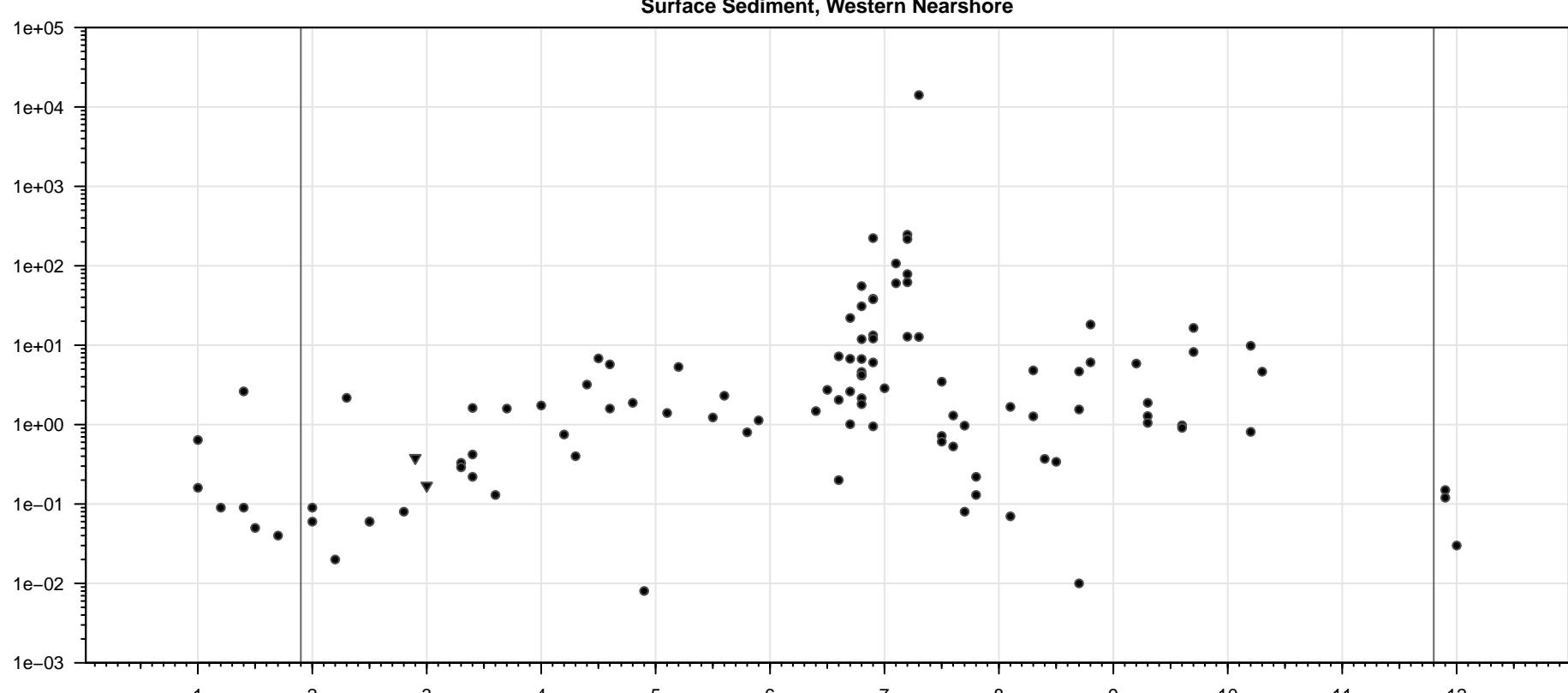
Surface Sediment, Eastern Nearshore



Surface Sediment, Navigation Channel



Surface Sediment, Western Nearshore



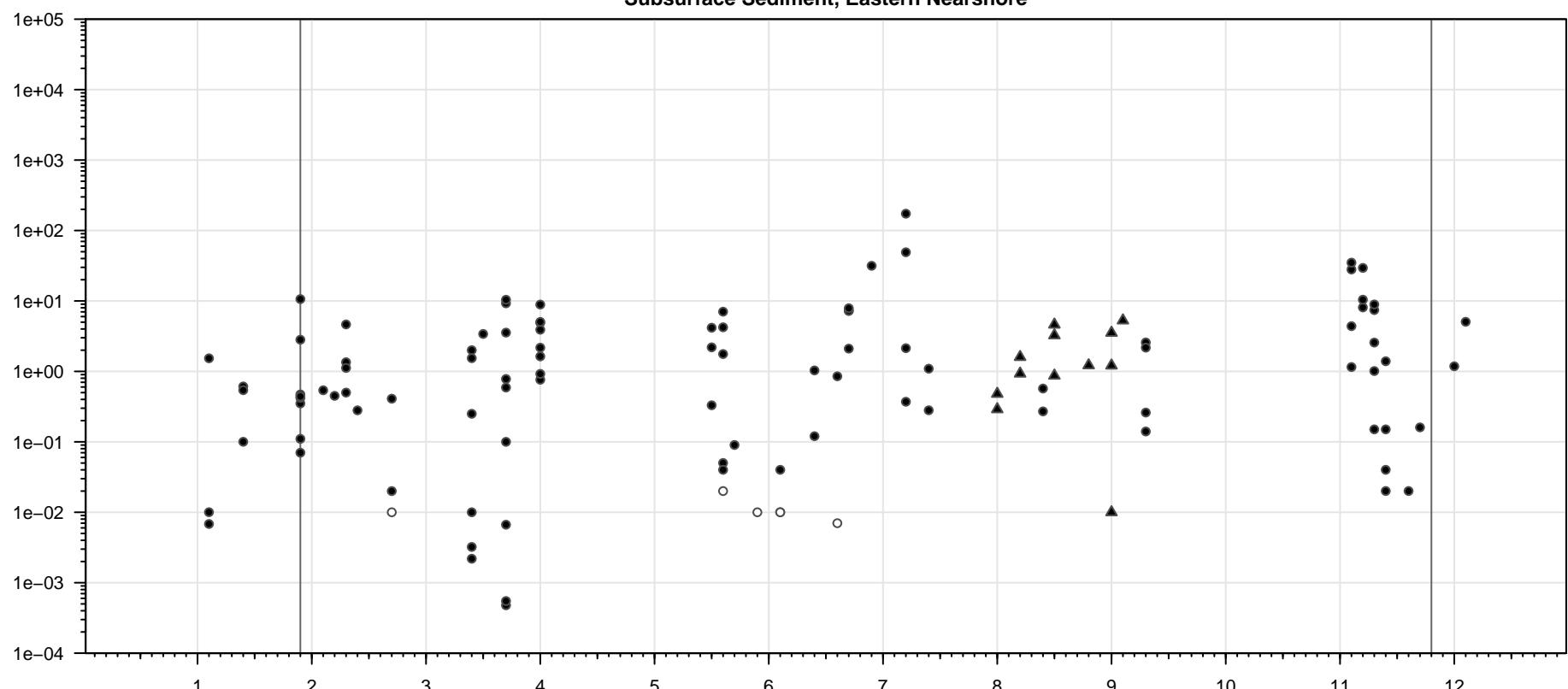
River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

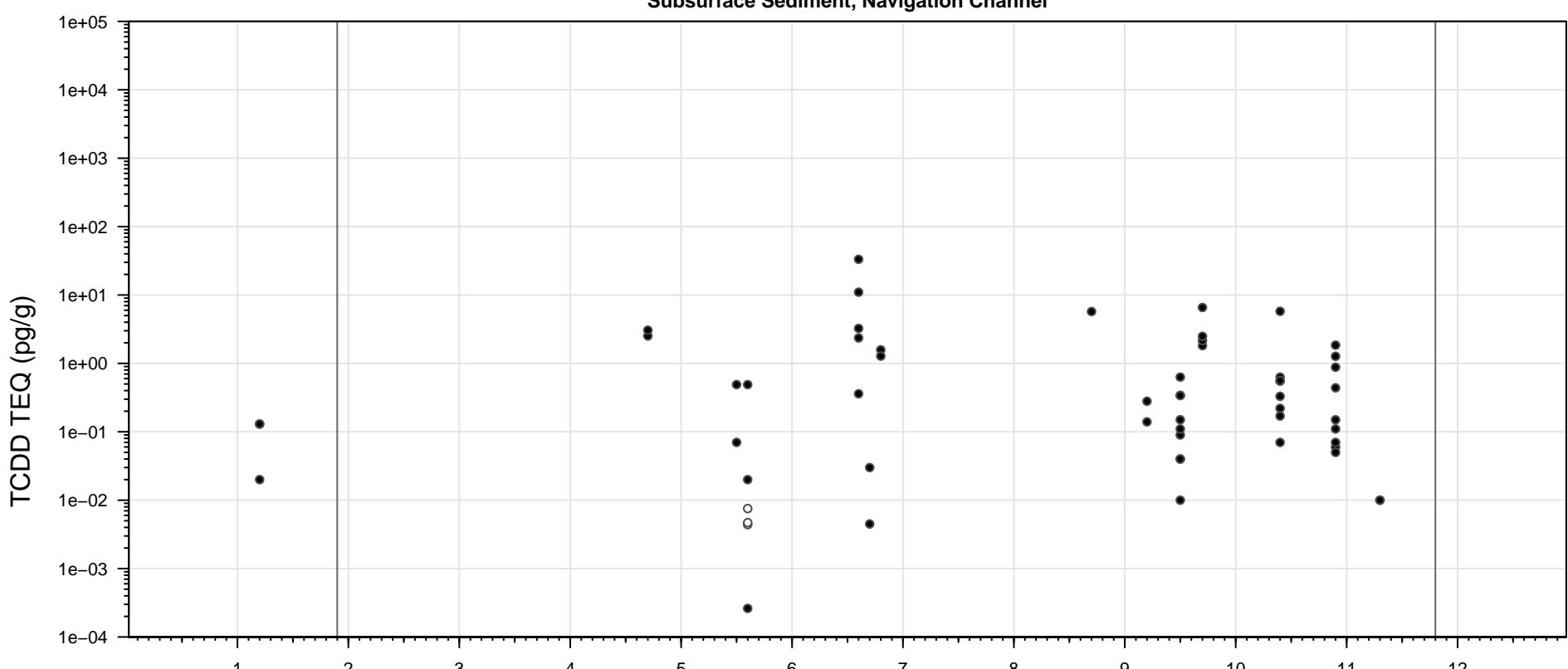
- Detected
- Non-Detected

Figure 5.2-7
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of TCDD TEQ
Concentrations in Surface Sediment, RM 0.8–12.2

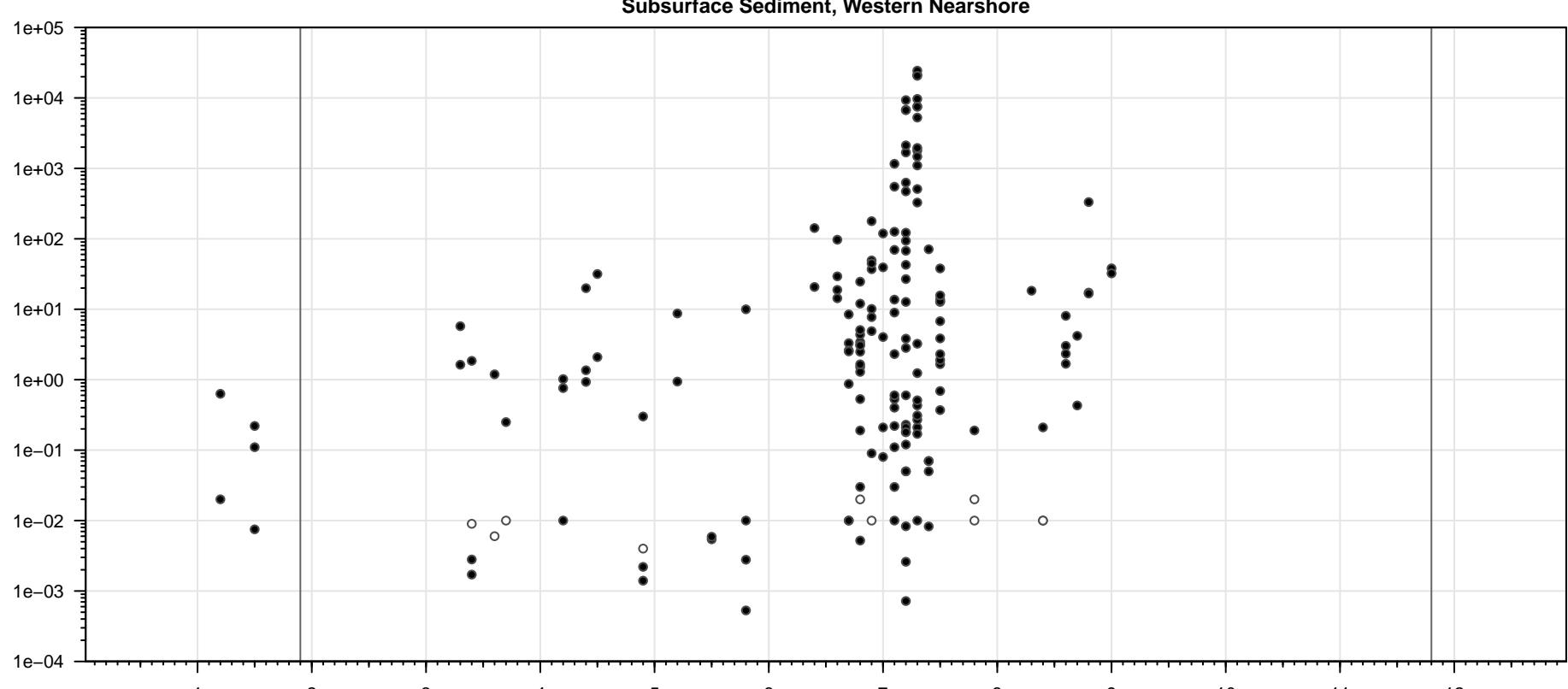
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

- Detected
- Non-Detected

Figure 5.2-8
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of TCDD TEQ
Concentrations in Subsurface Sediment, RM 0.8–12.2

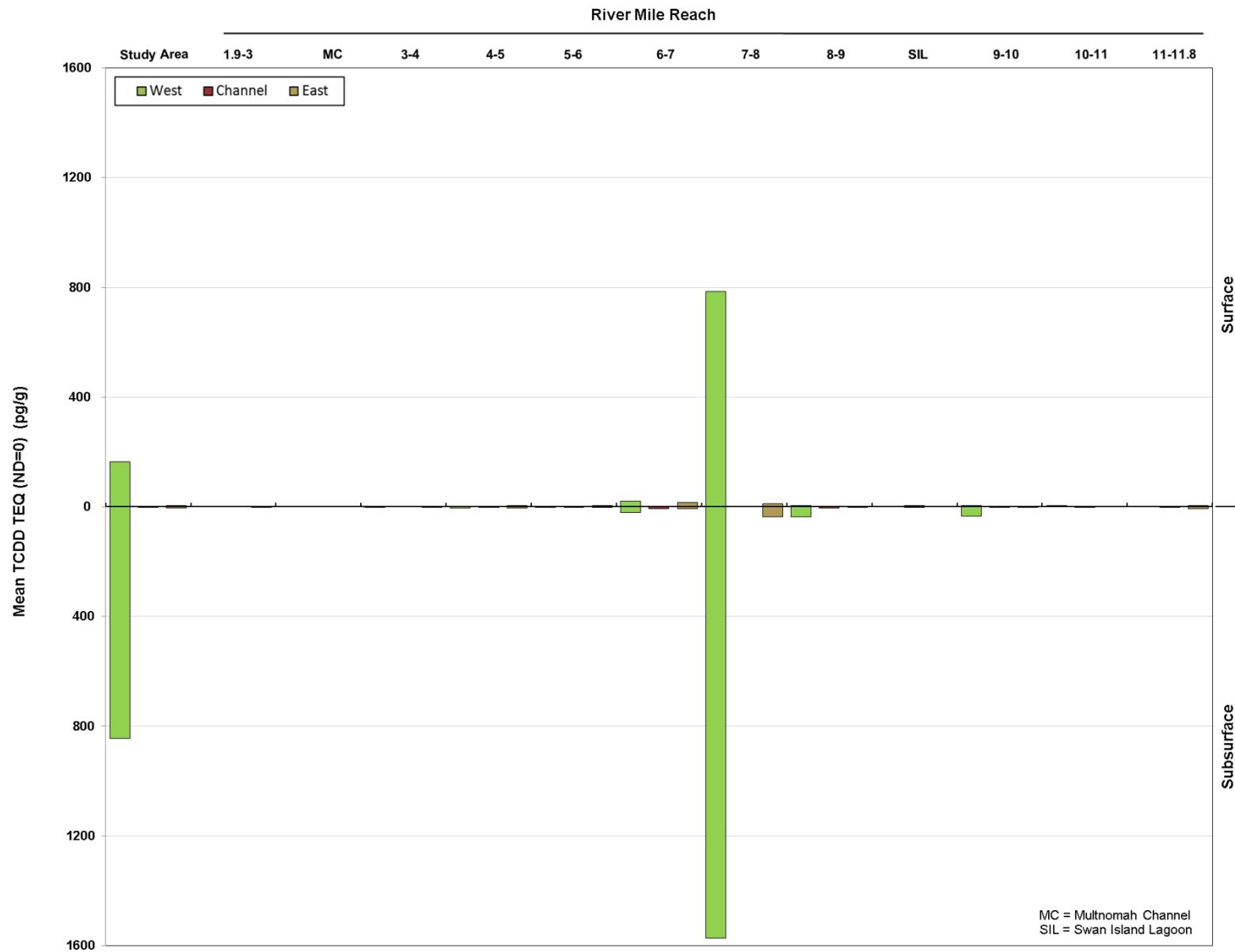
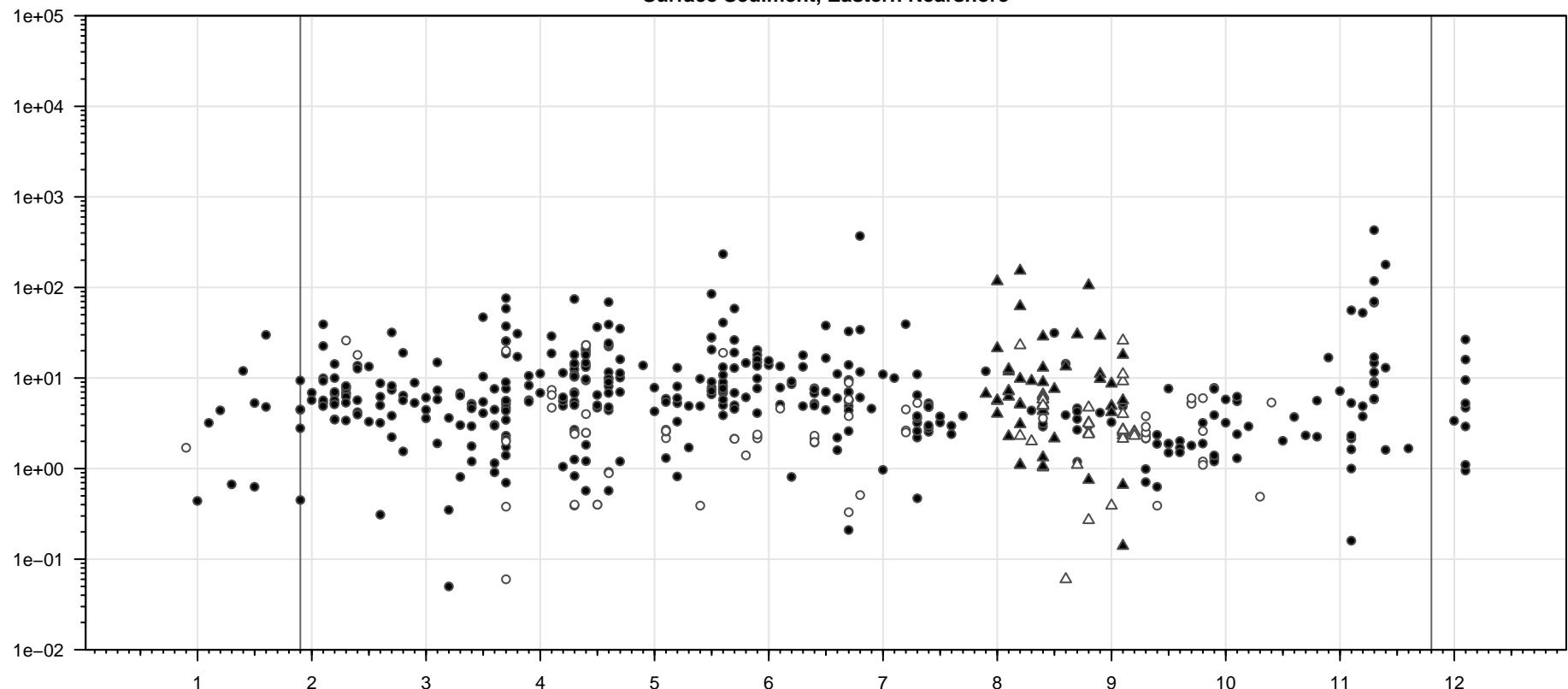
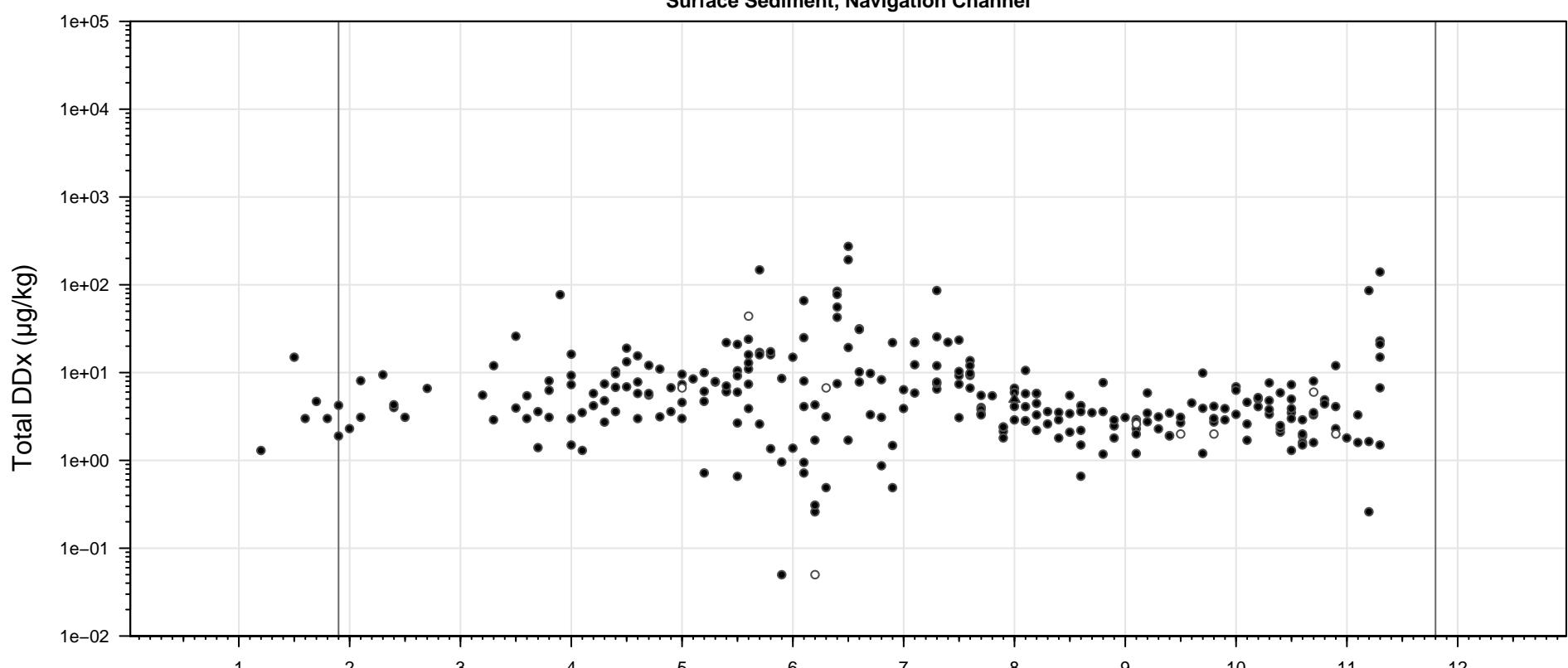


Figure 5.2-9
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean TCDD TEQ Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

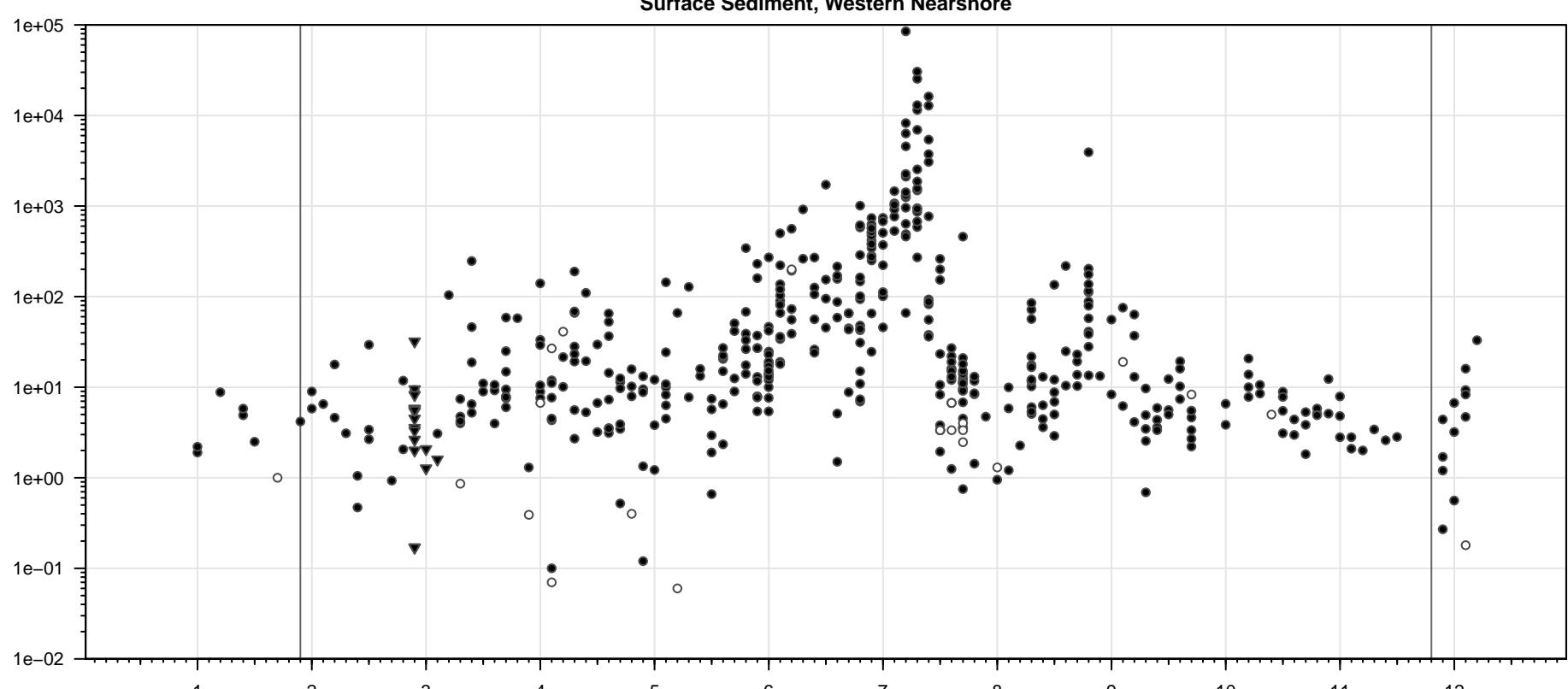
Surface Sediment, Eastern Nearshore



Surface Sediment, Navigation Channel



Surface Sediment, Western Nearshore



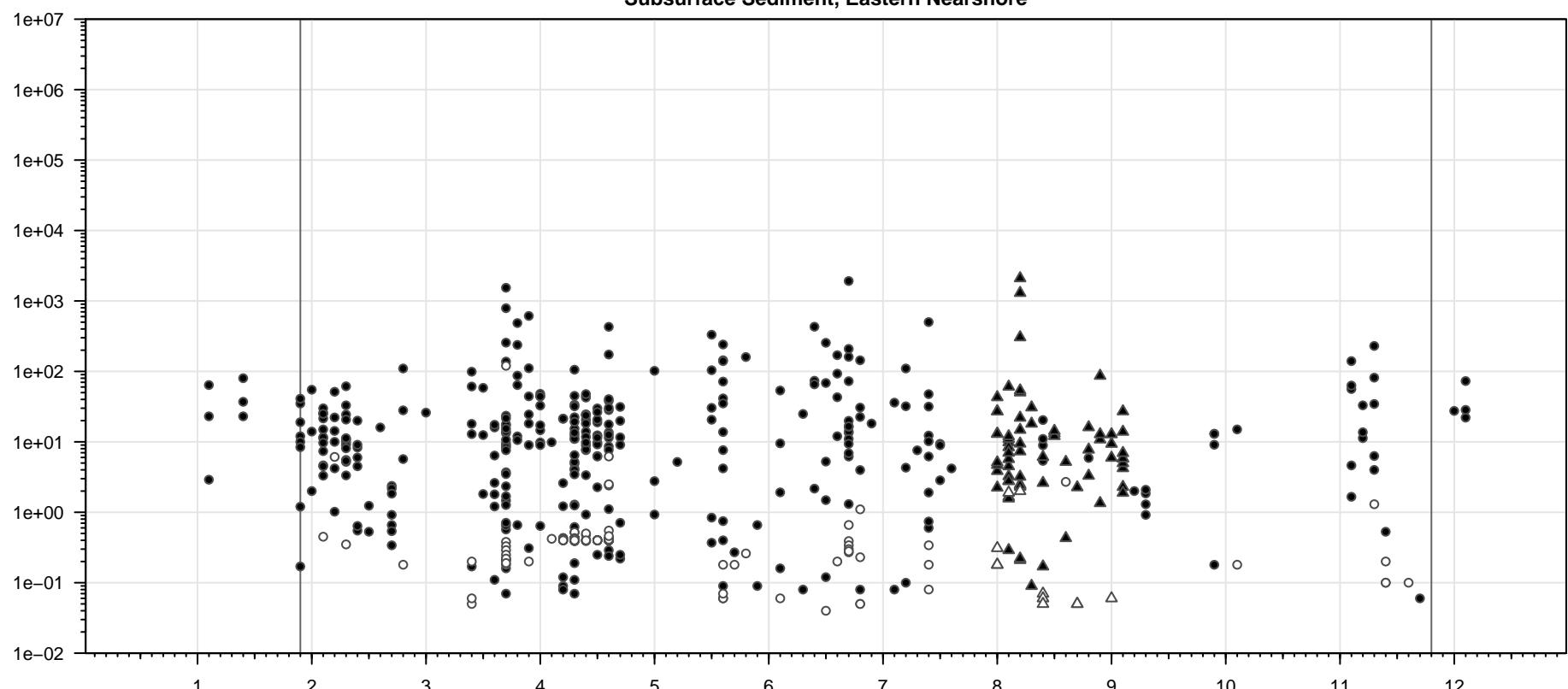
River Mile

● River Bed
▲ Swan Island
▼ Multnomah Channel

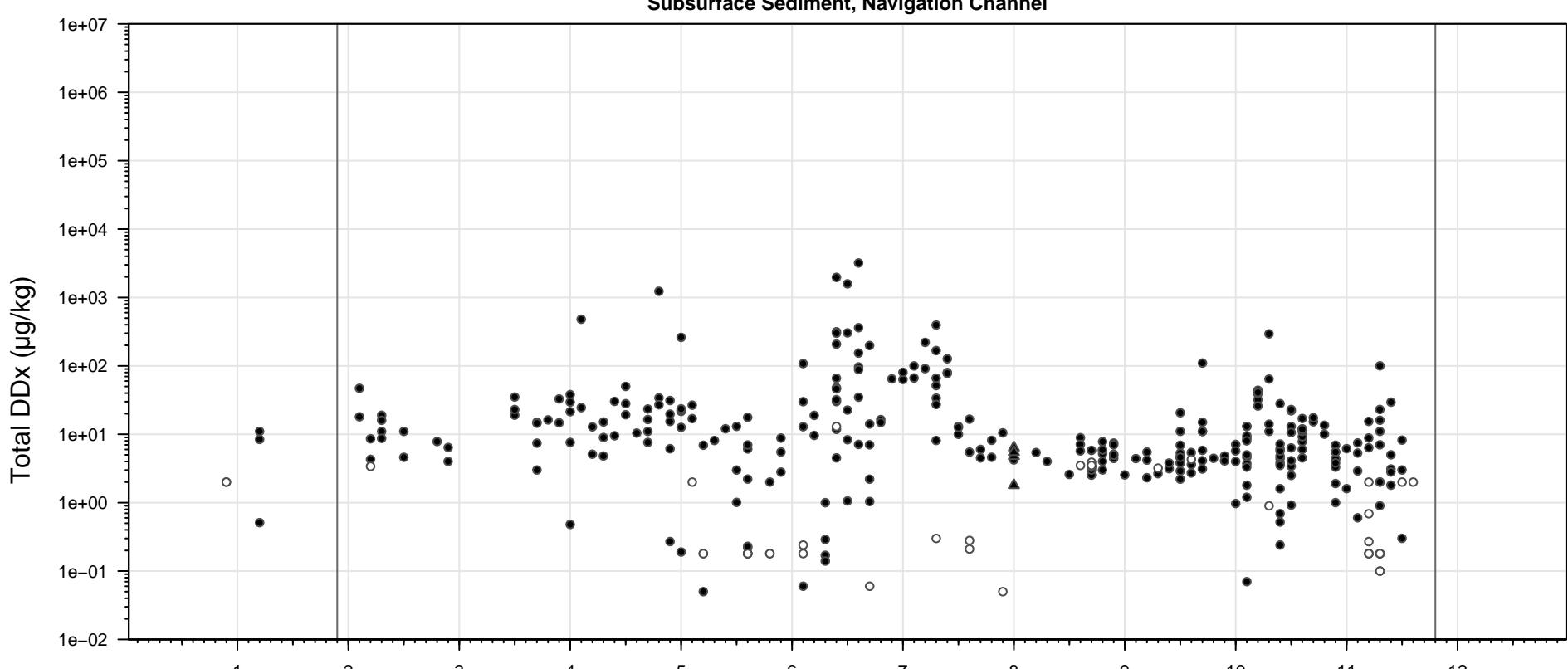
● Detected
○ Non-Detected

Figure 5.2-10
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDx
Concentrations in Surface Sediment, RM 0.8–12.2

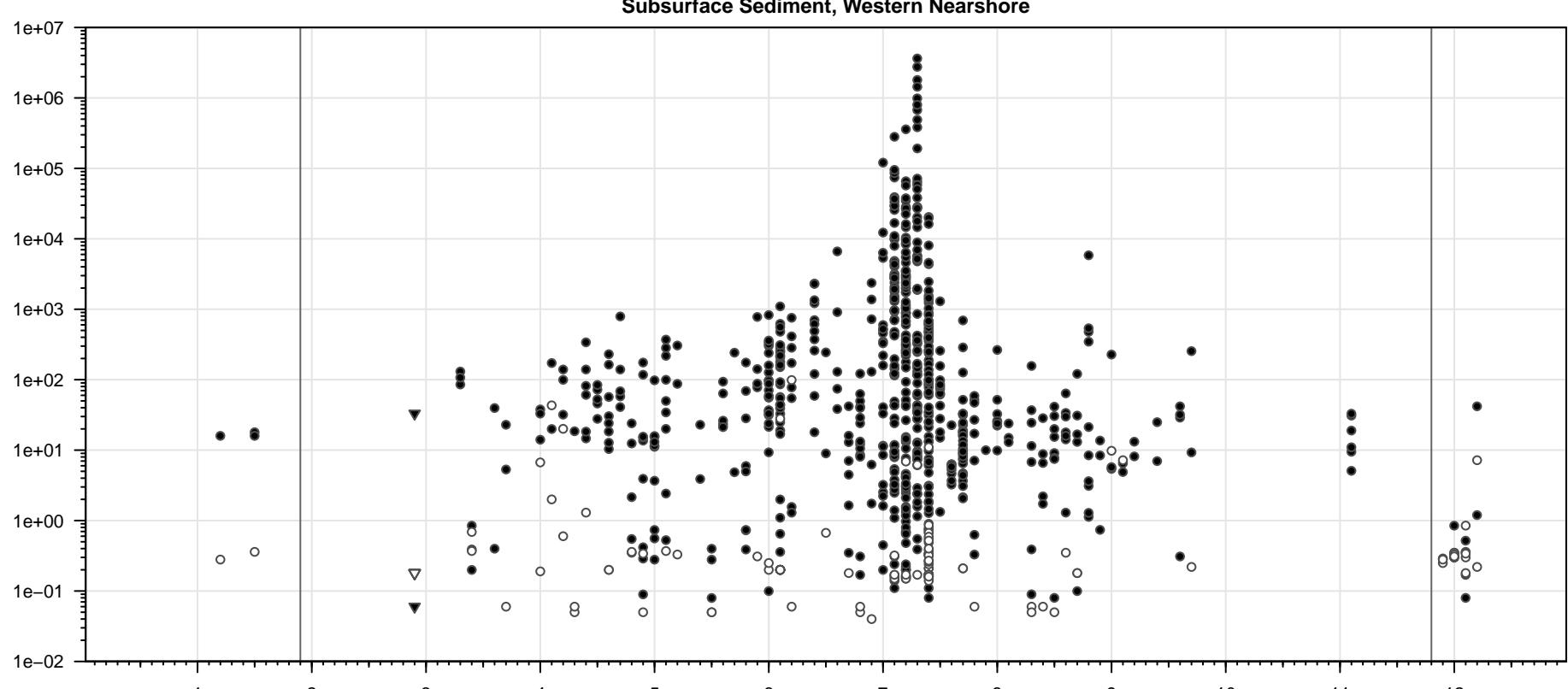
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

- Detected
- Non-Detected

Figure 5.2-11
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDx
Concentrations in Subsurface Sediment, RM 0.8–12.2

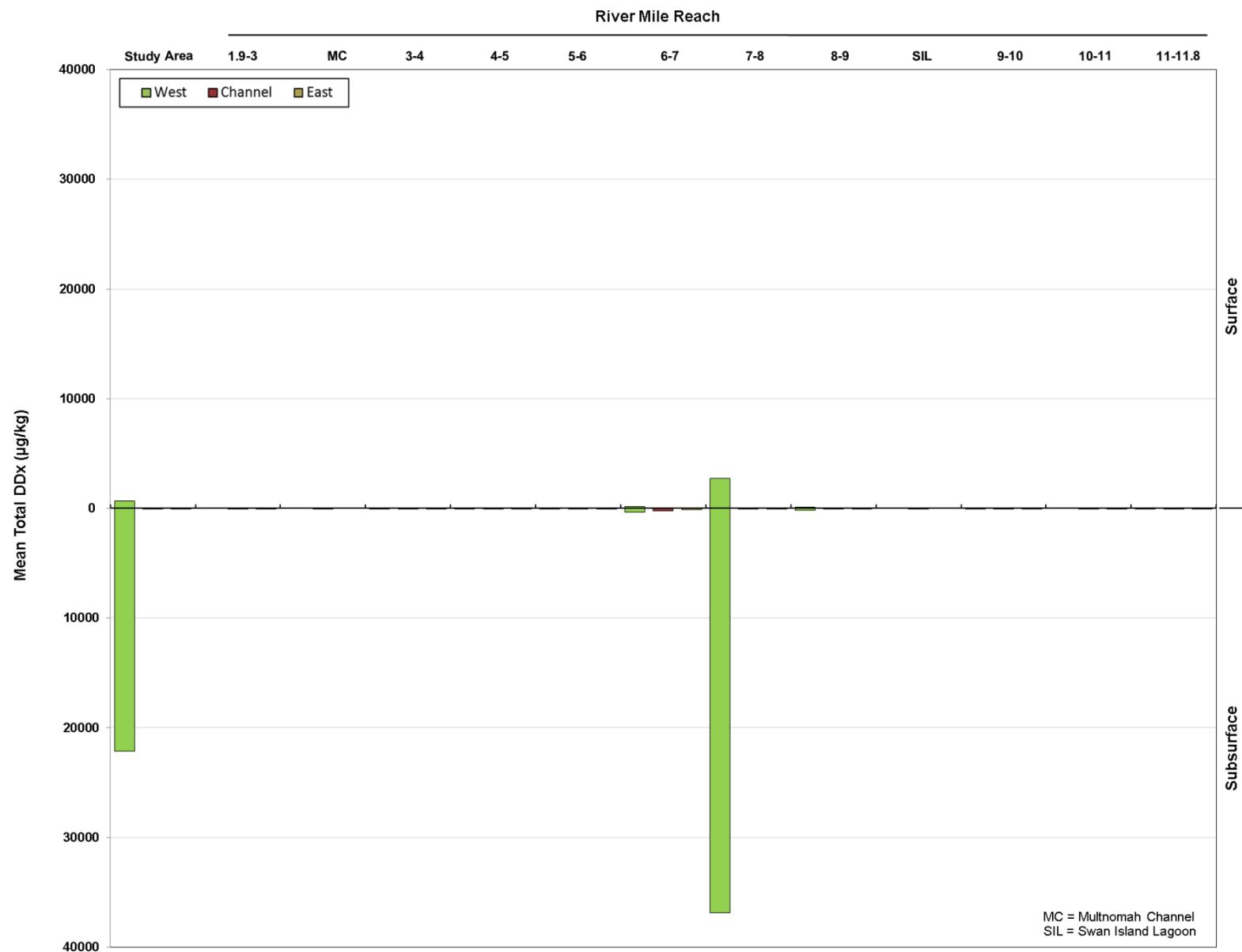


Figure 5.2-12
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total DDx Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

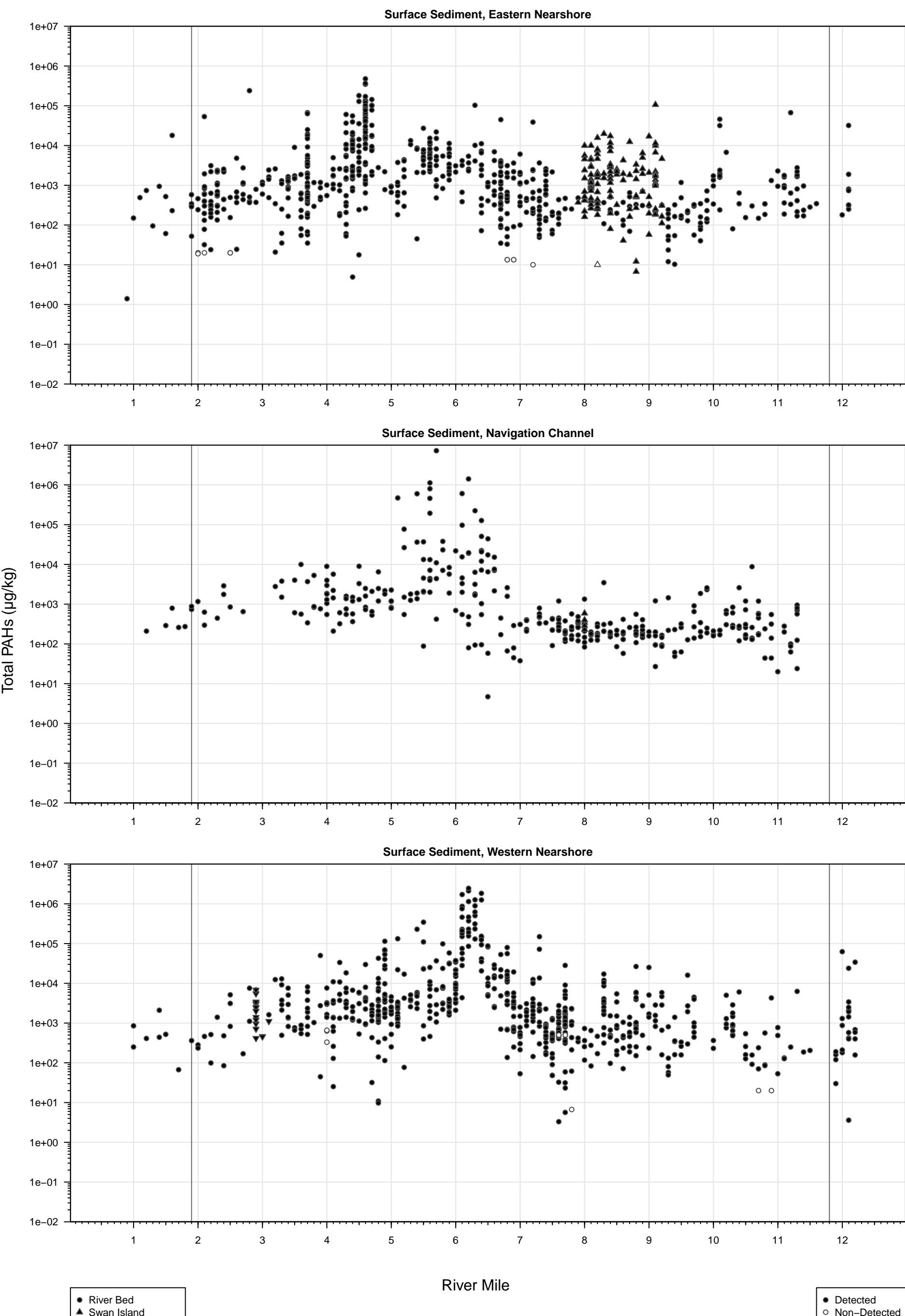
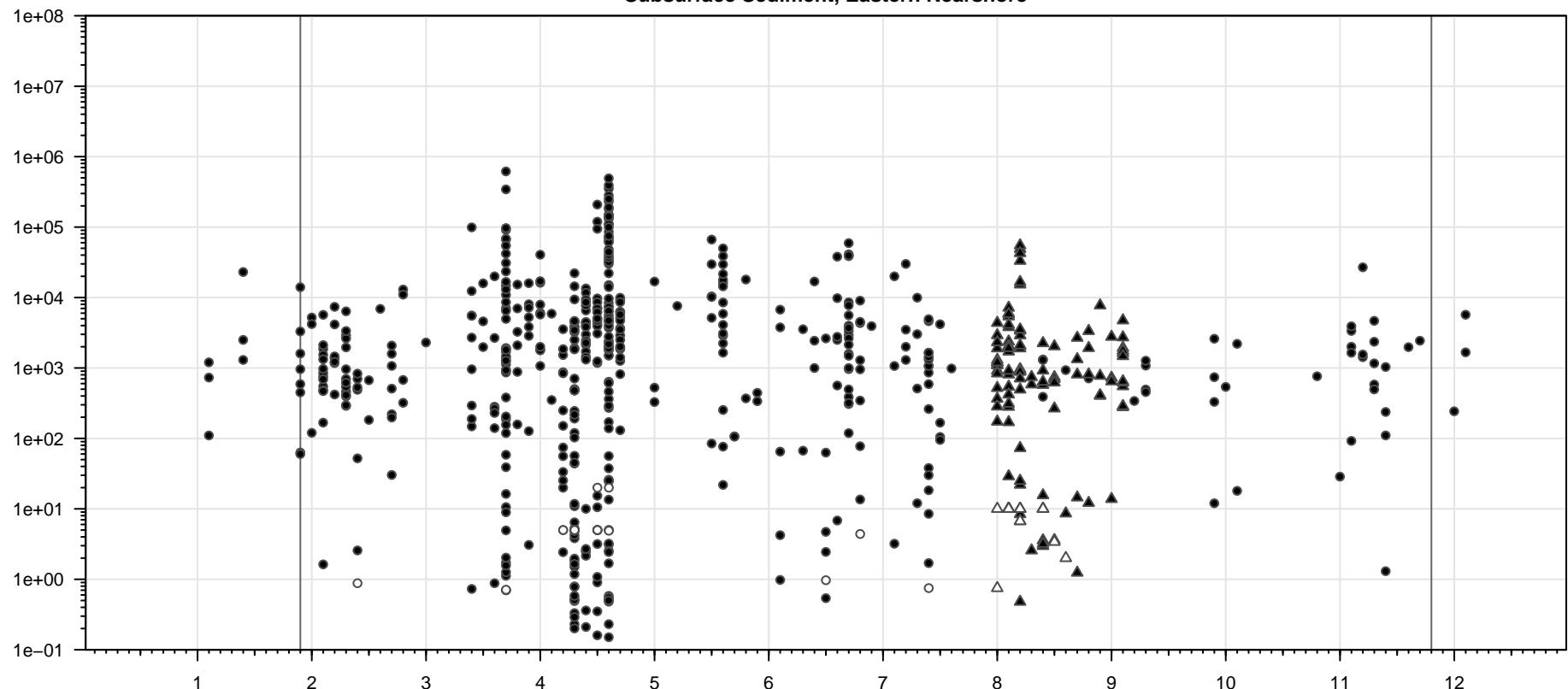
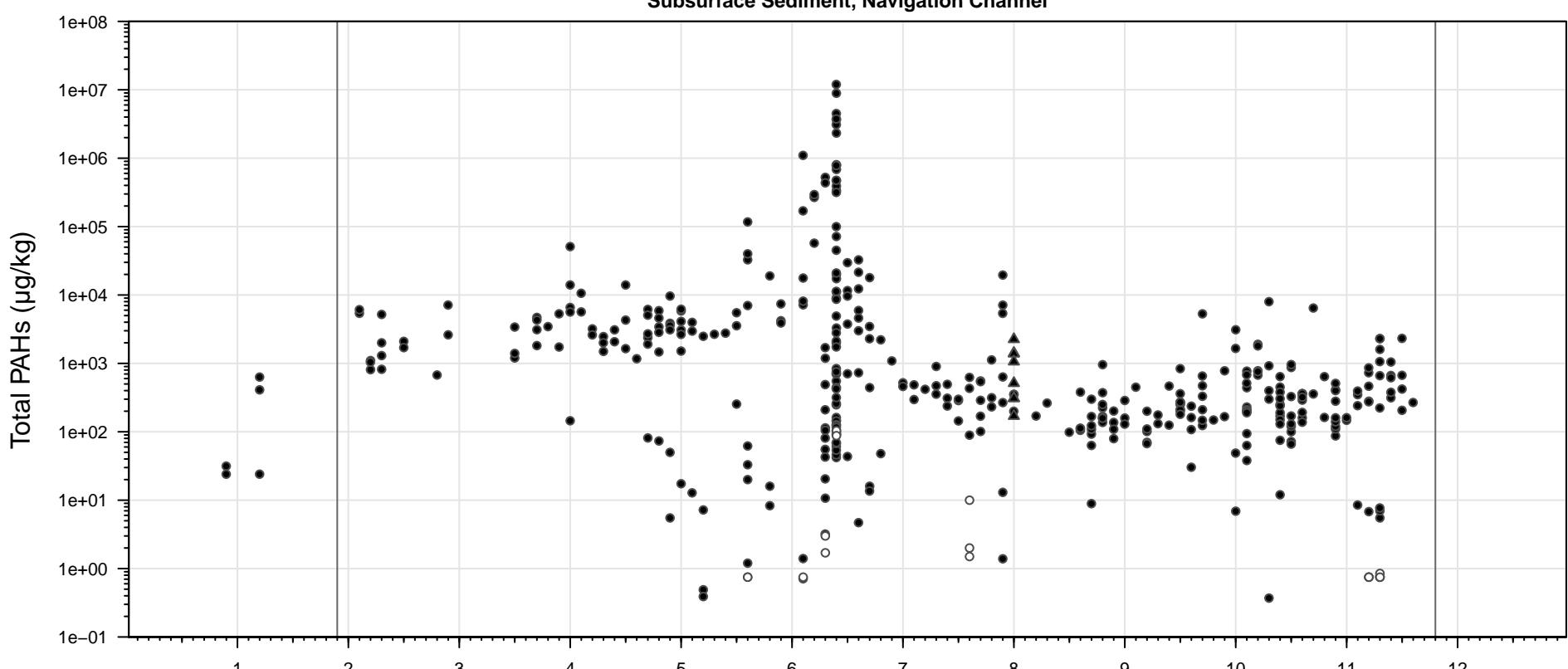


Figure 5.2-13
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PAHs
Concentrations in Surface Sediment, RM 0.8–12.2

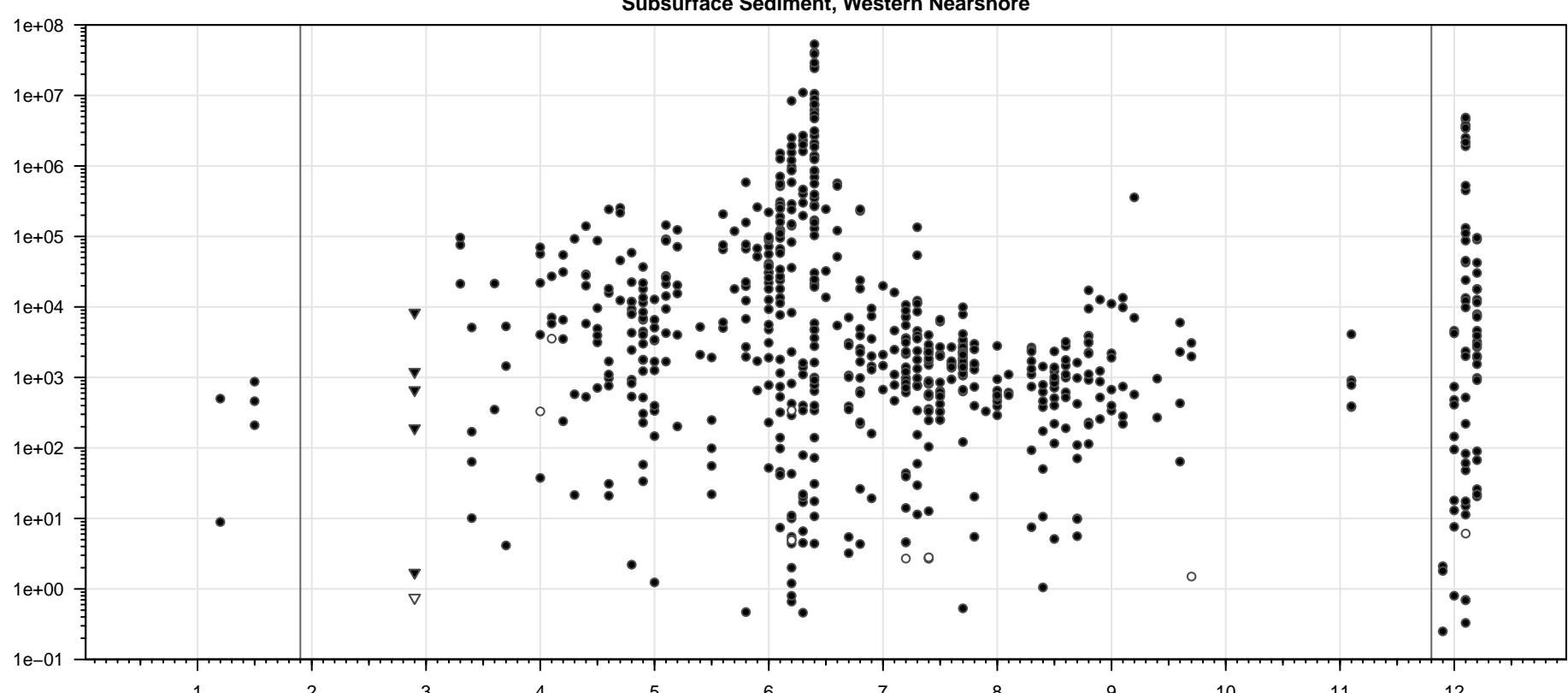
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

- Detected
- Non-Detected

Figure 5.2-14
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PAHs
Concentrations in Subsurface Sediment, RM 0.8–12.2

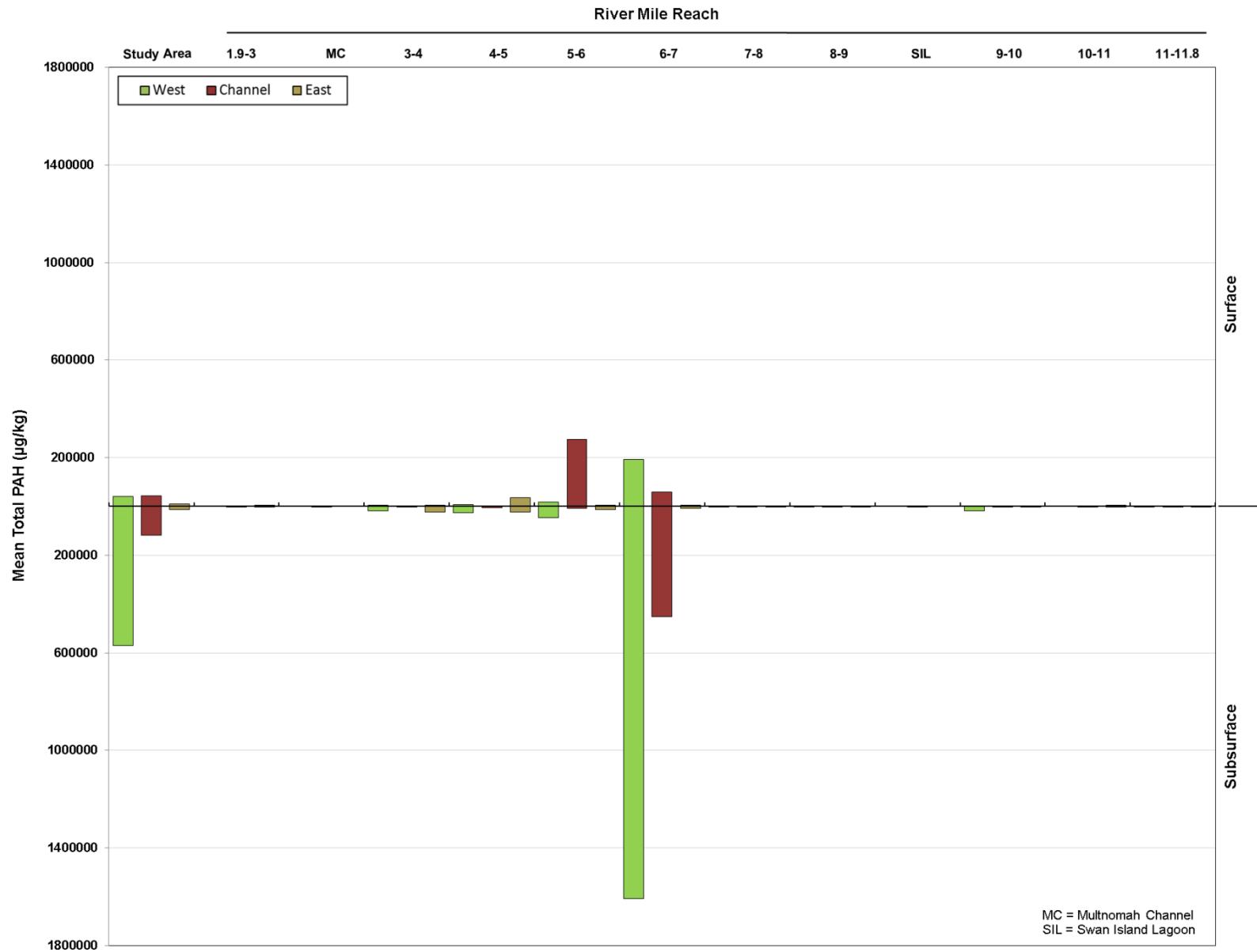


Figure 5.2-15
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total PAHs Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

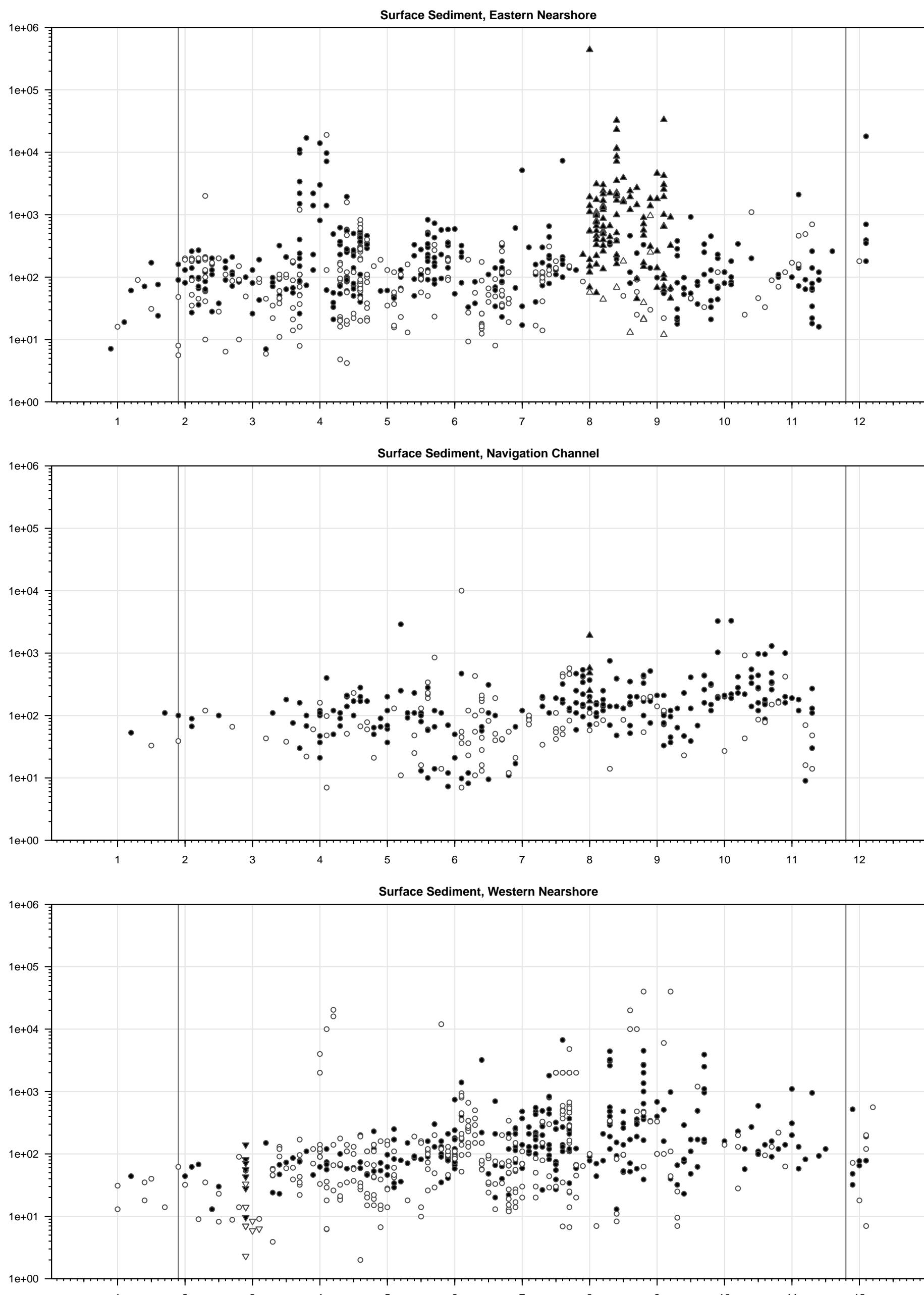
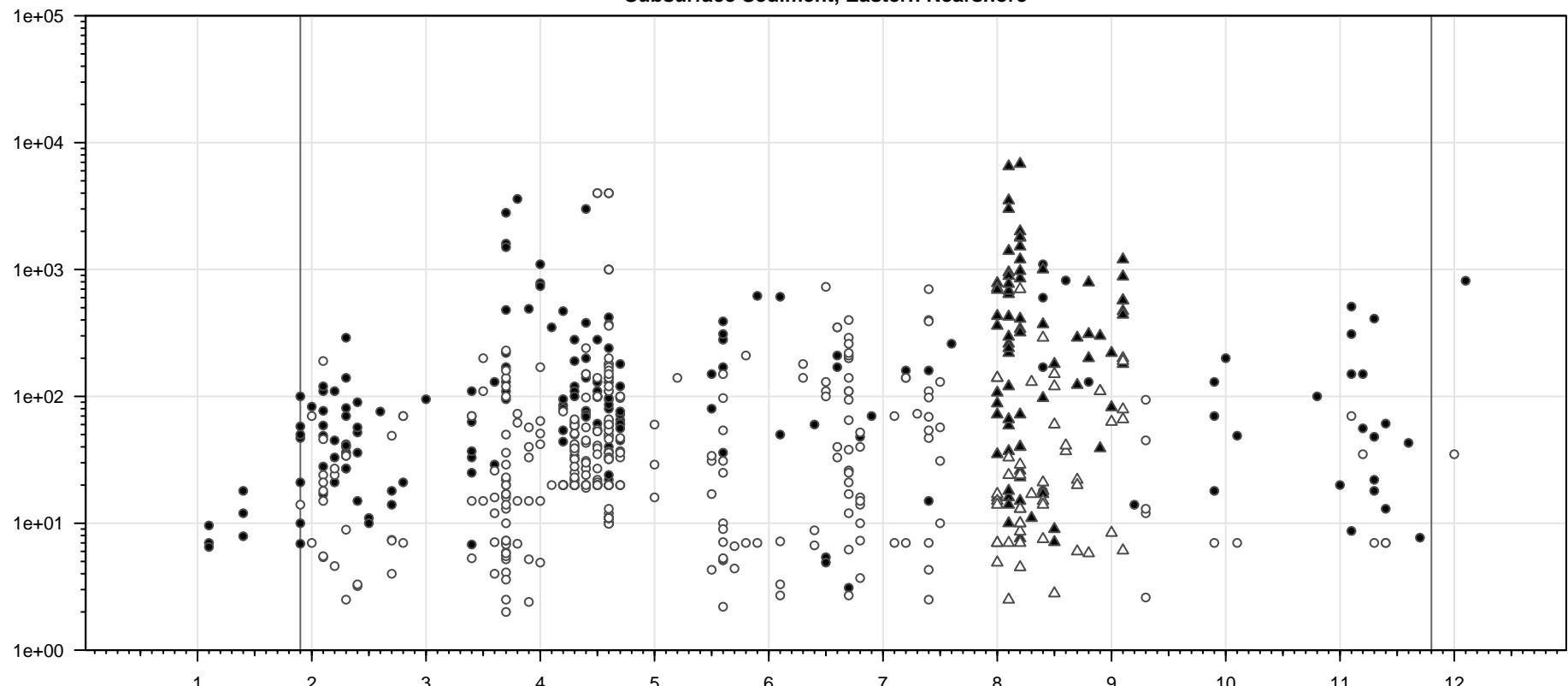
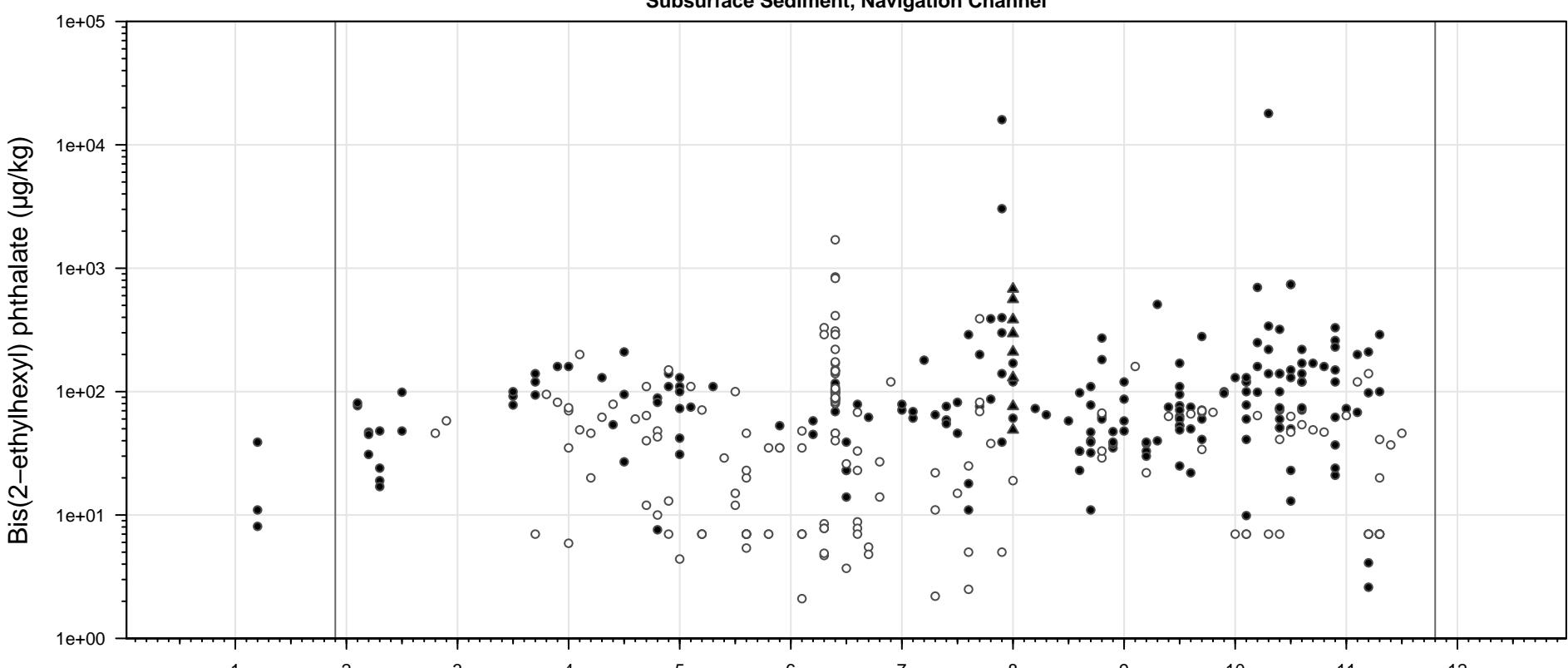


Figure 5.2-16
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Bis(2-ethylhexyl)phthalate
Concentrations in Surface Sediment, RM 0.8–12.2

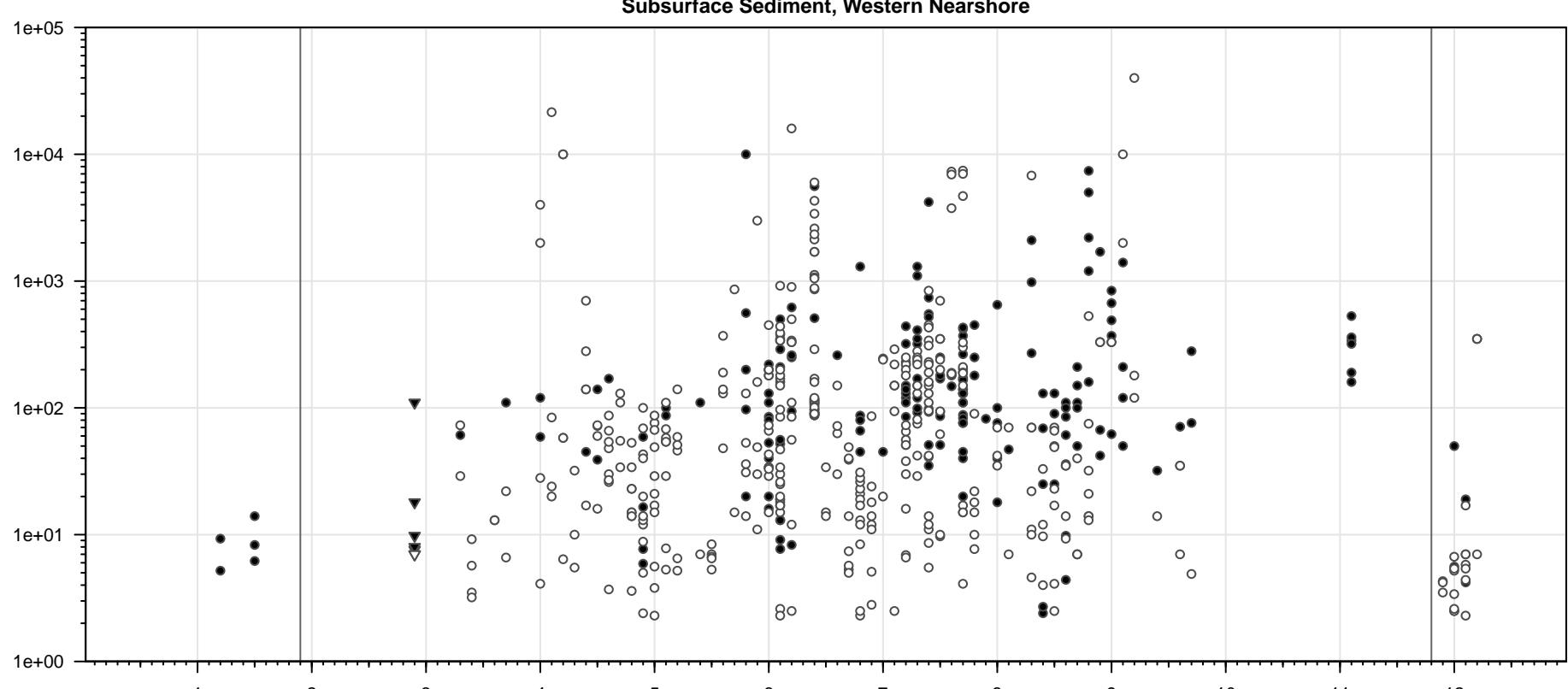
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

- Detected
- Non-Detected

Figure 5.2-17
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Bis(2-ethylhexyl)phthalate
Concentrations in Subsurface Sediment, RM 0.8–12.2

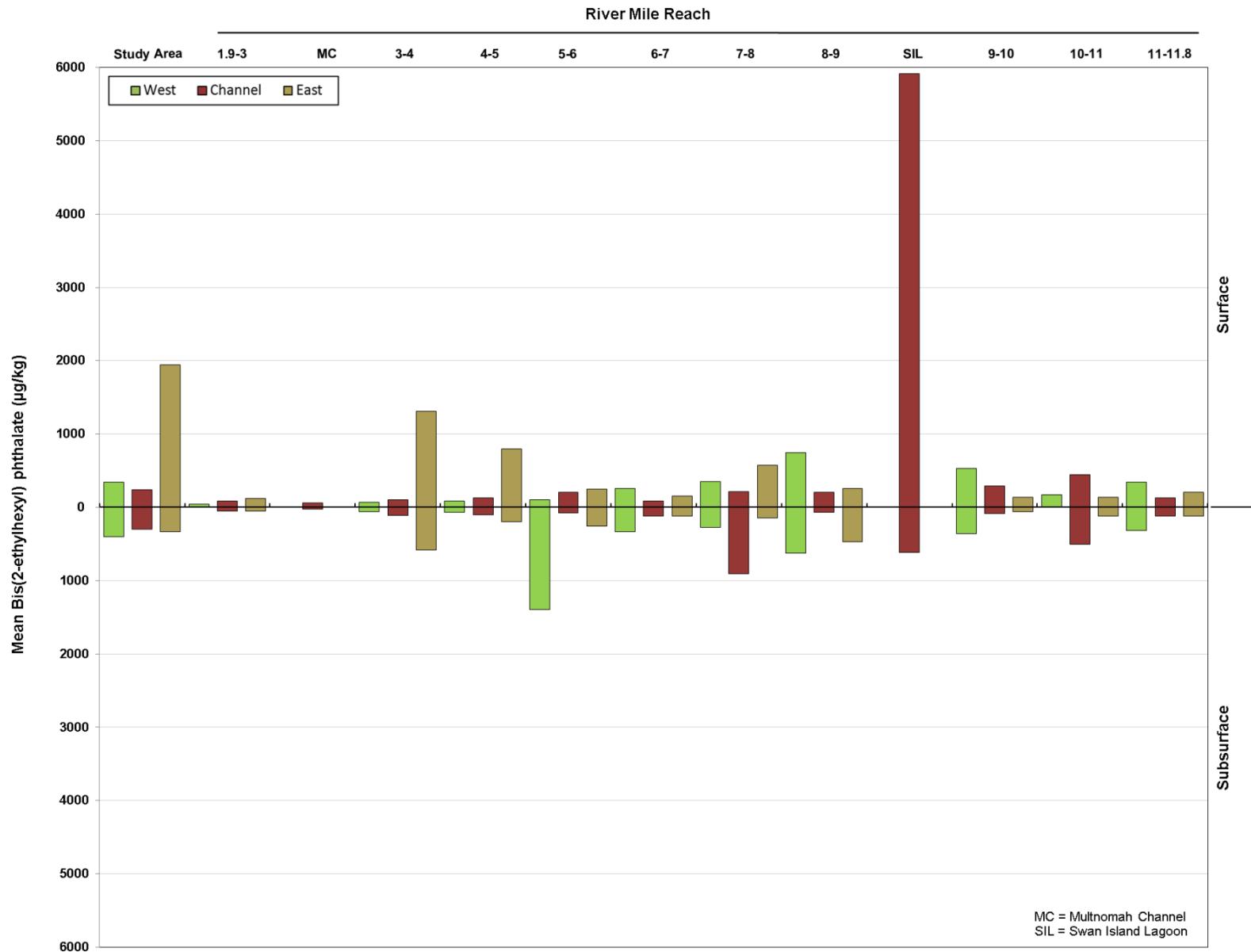


Figure 5.2-18
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Bis(2-ethylhexyl) phthalate Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

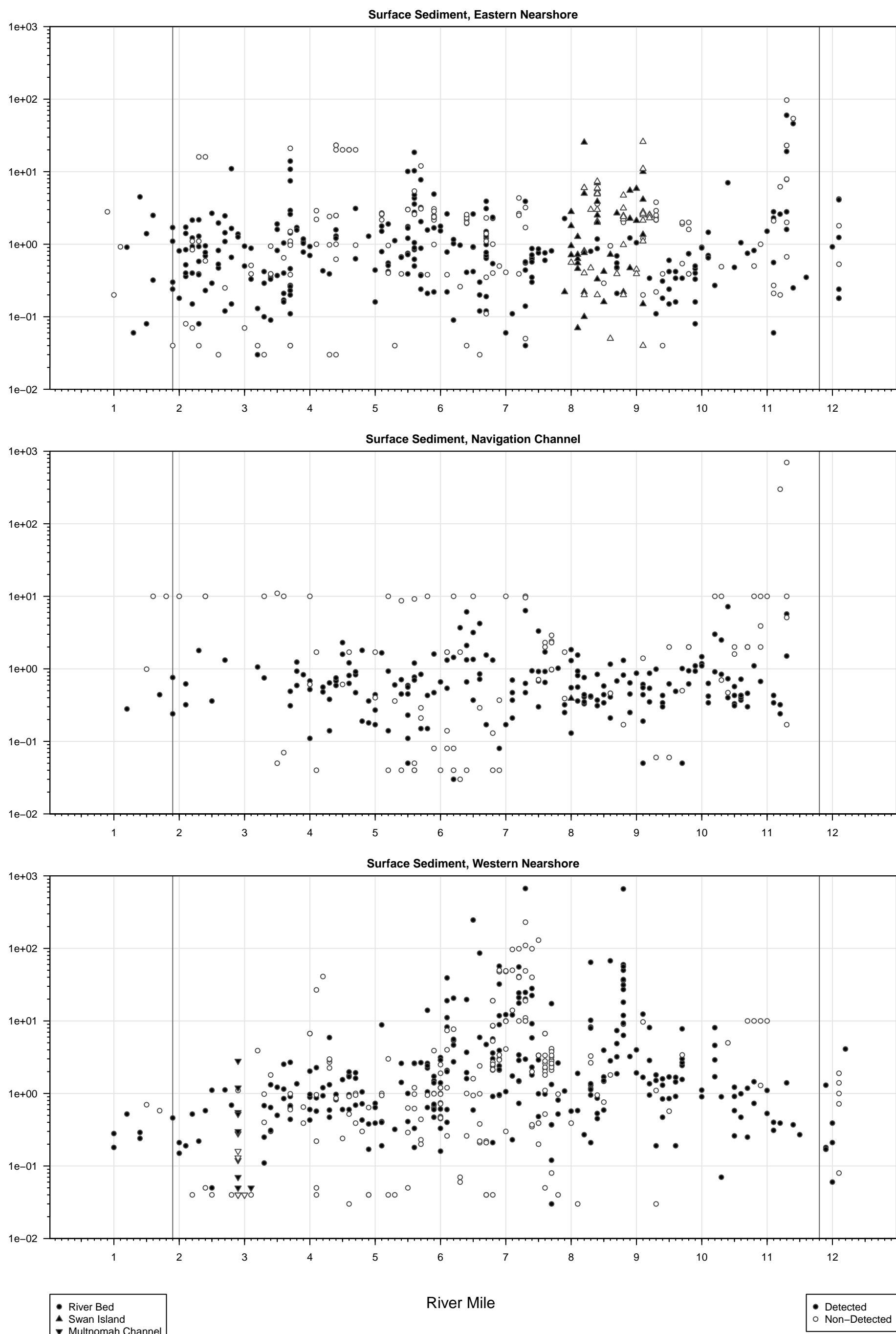


Figure 5.2-19
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Chlordanes
Concentrations in Surface Sediment, RM 0.8–12.2

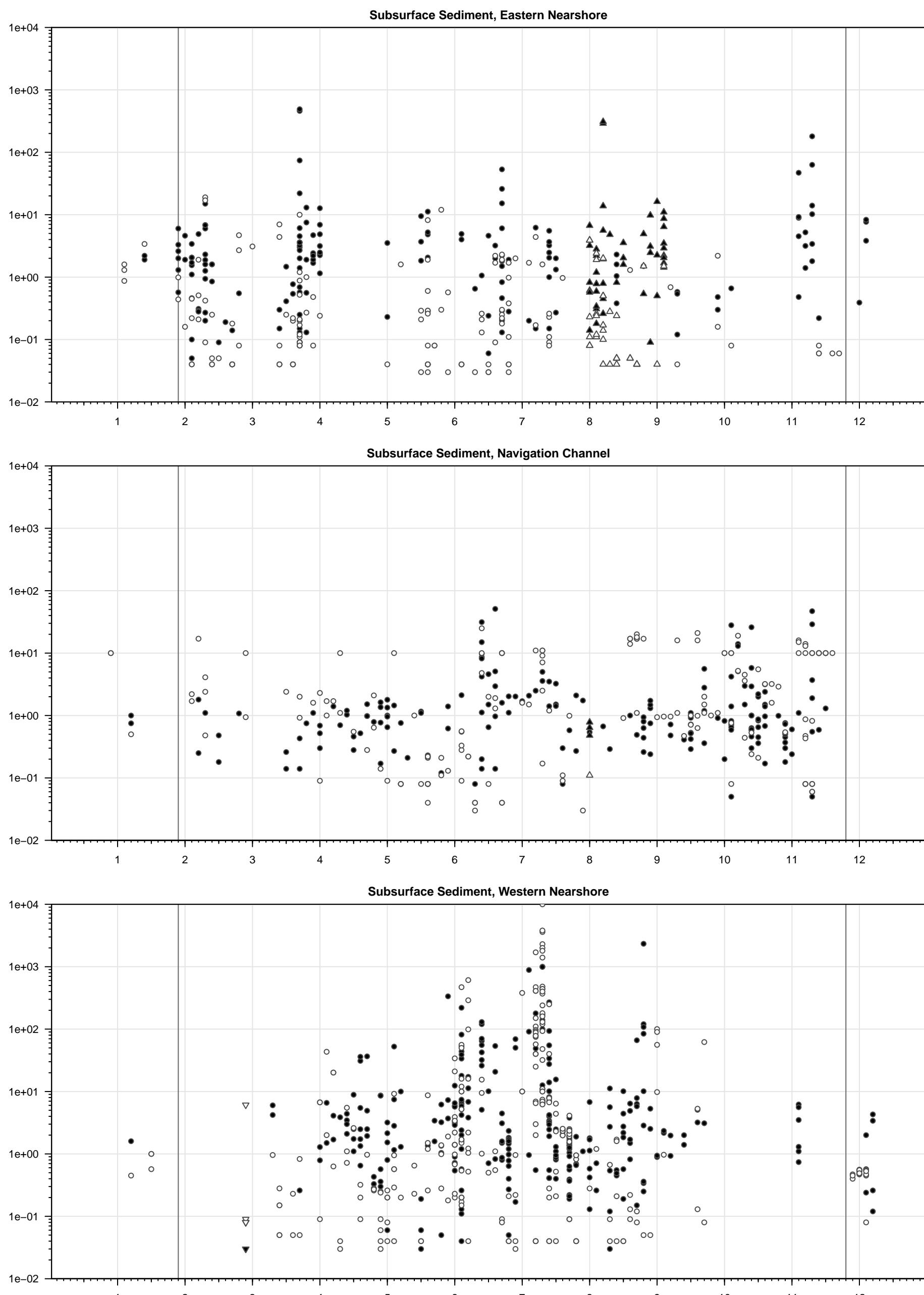


Figure 5.2–20
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total Chlordanes
 Concentrations in Subsurface Sediment, RM 0.8–12.2

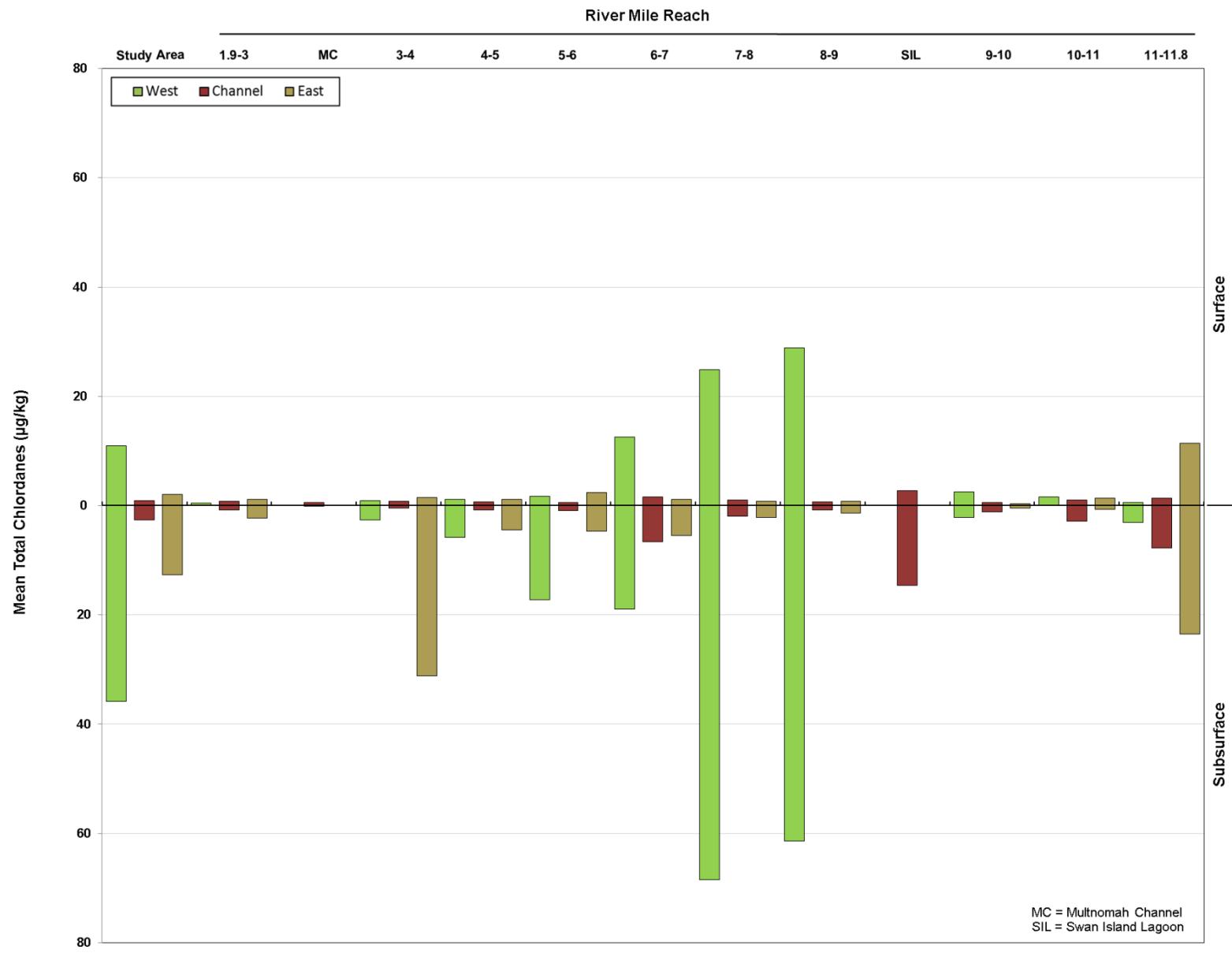


Figure 5.2-21
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total Chlordanes Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

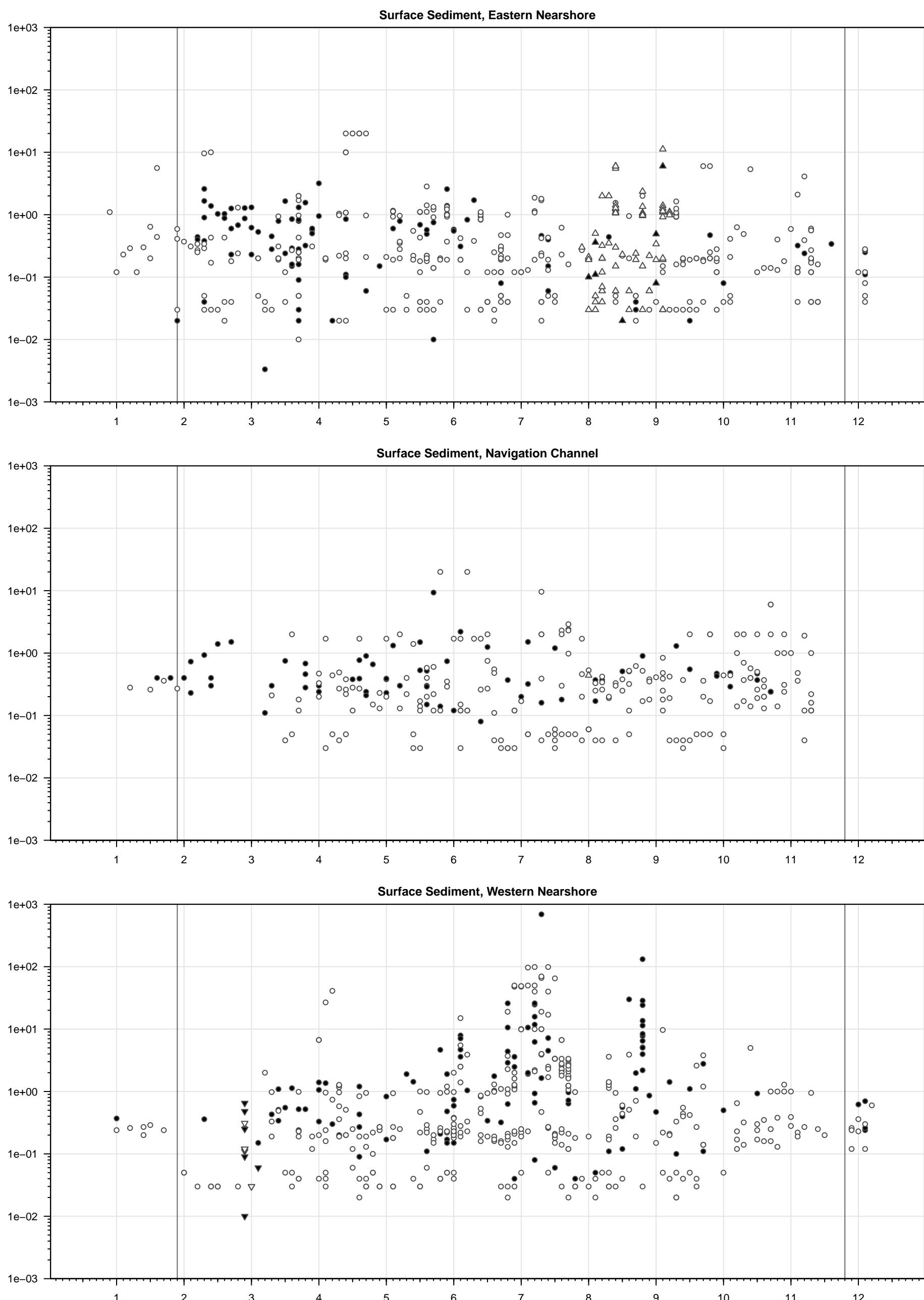
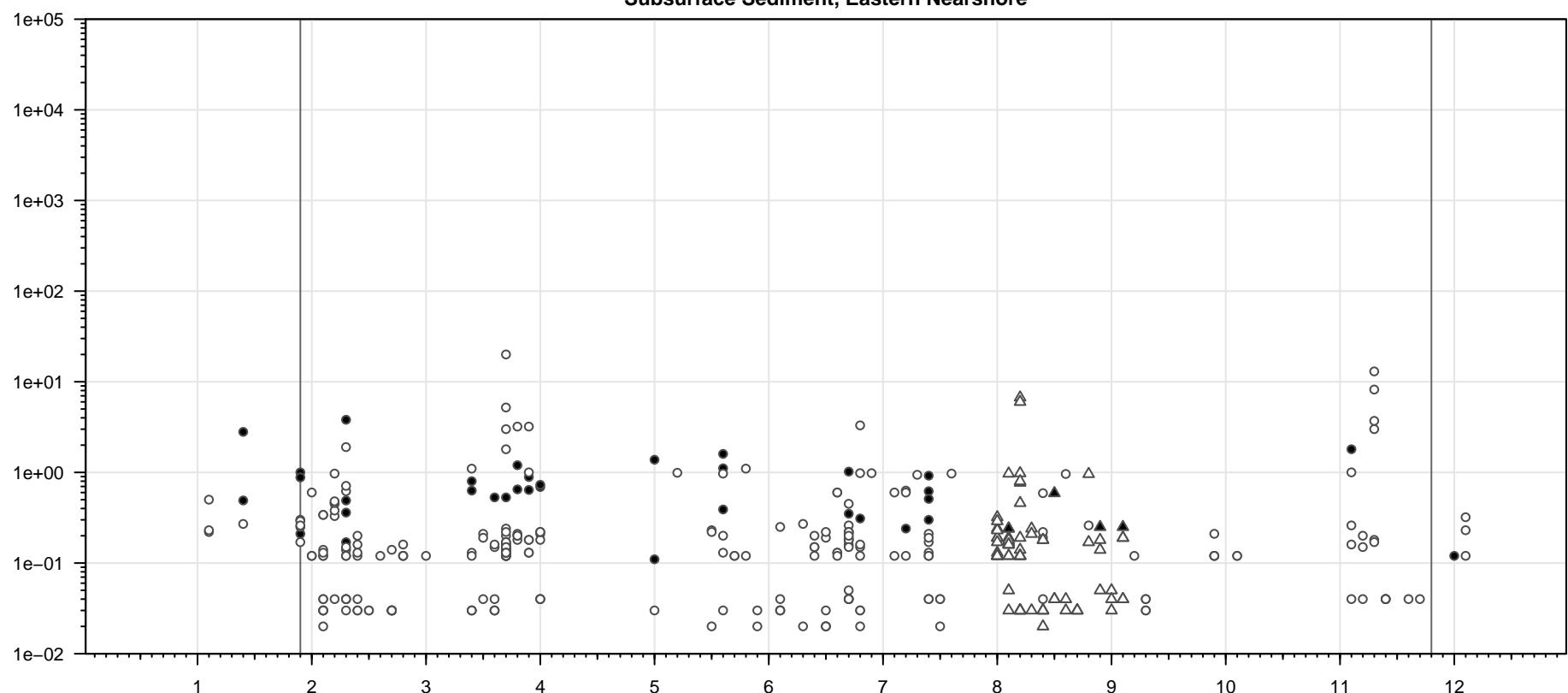
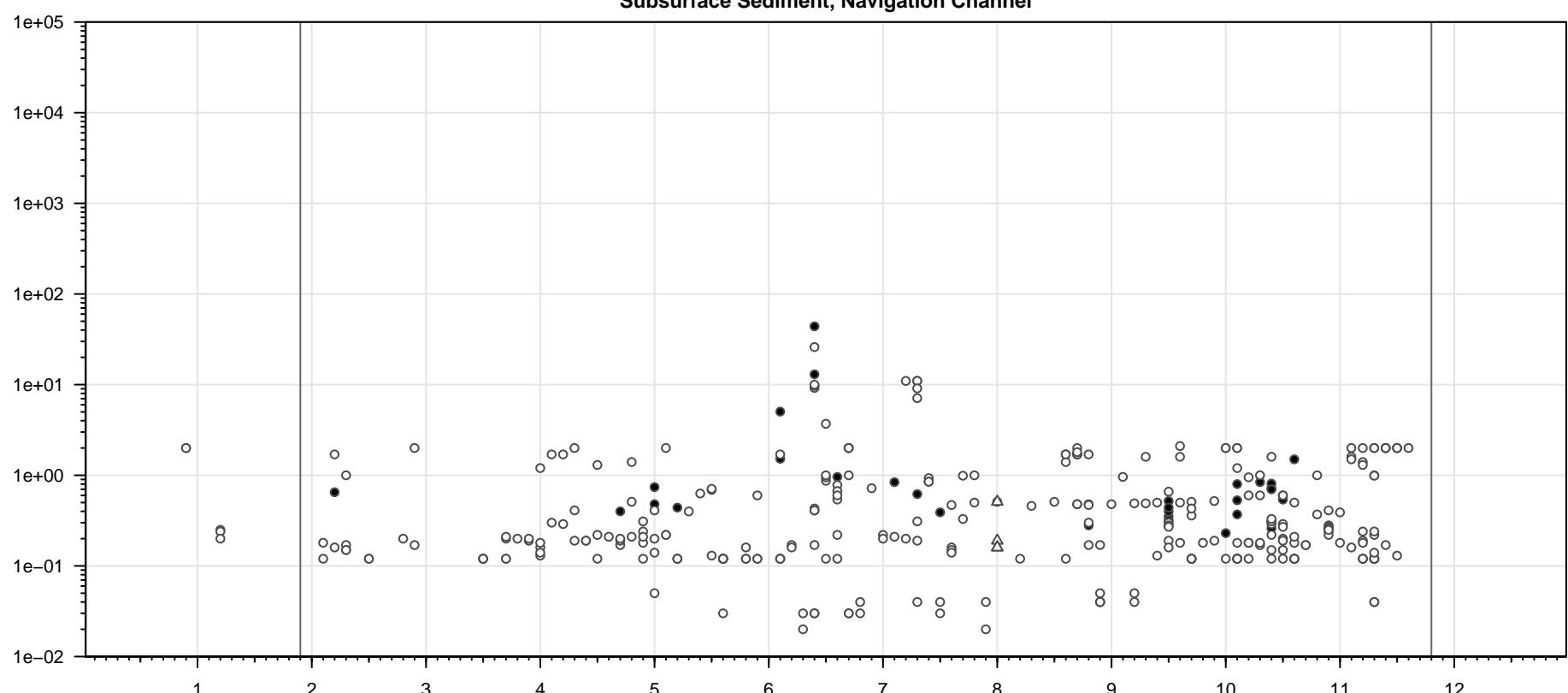


Figure 5.2-22
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Aldrin
 Concentrations in Surface Sediment, RM 0.8–12.2

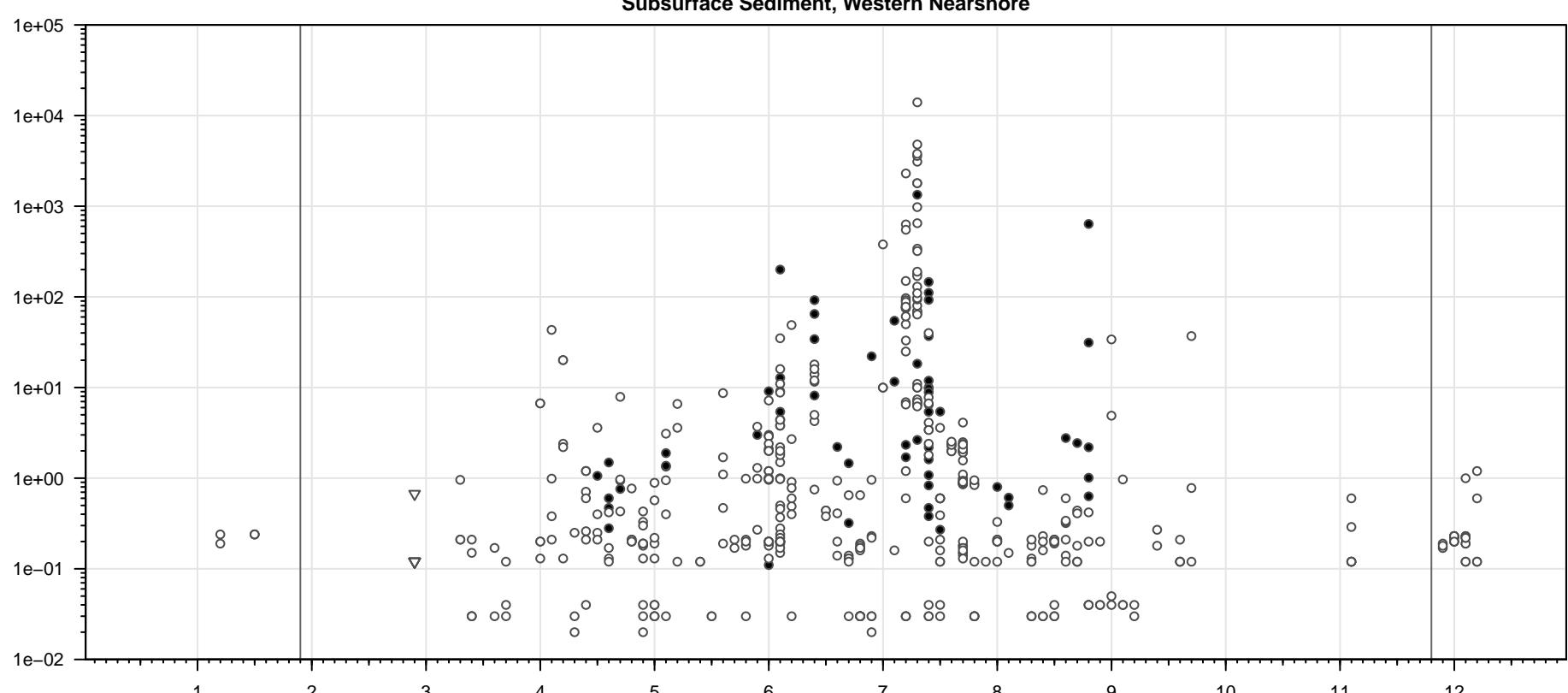
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

- Detected
- Non-Detected

Figure 5.2-23
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Aldrin
Concentrations in Subsurface Sediment, RM 0.8–12.2

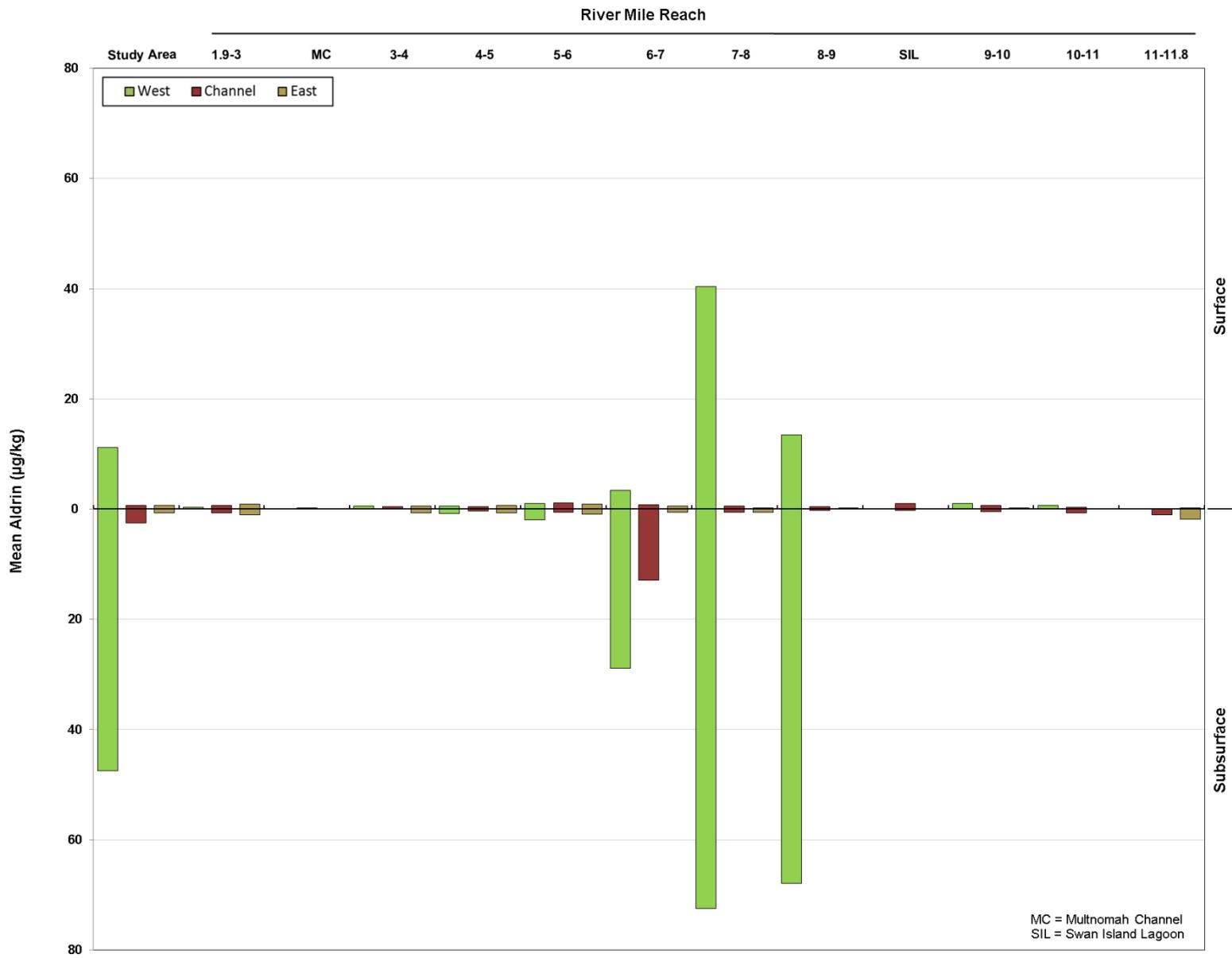


Figure 5.2-24
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Aldrin Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

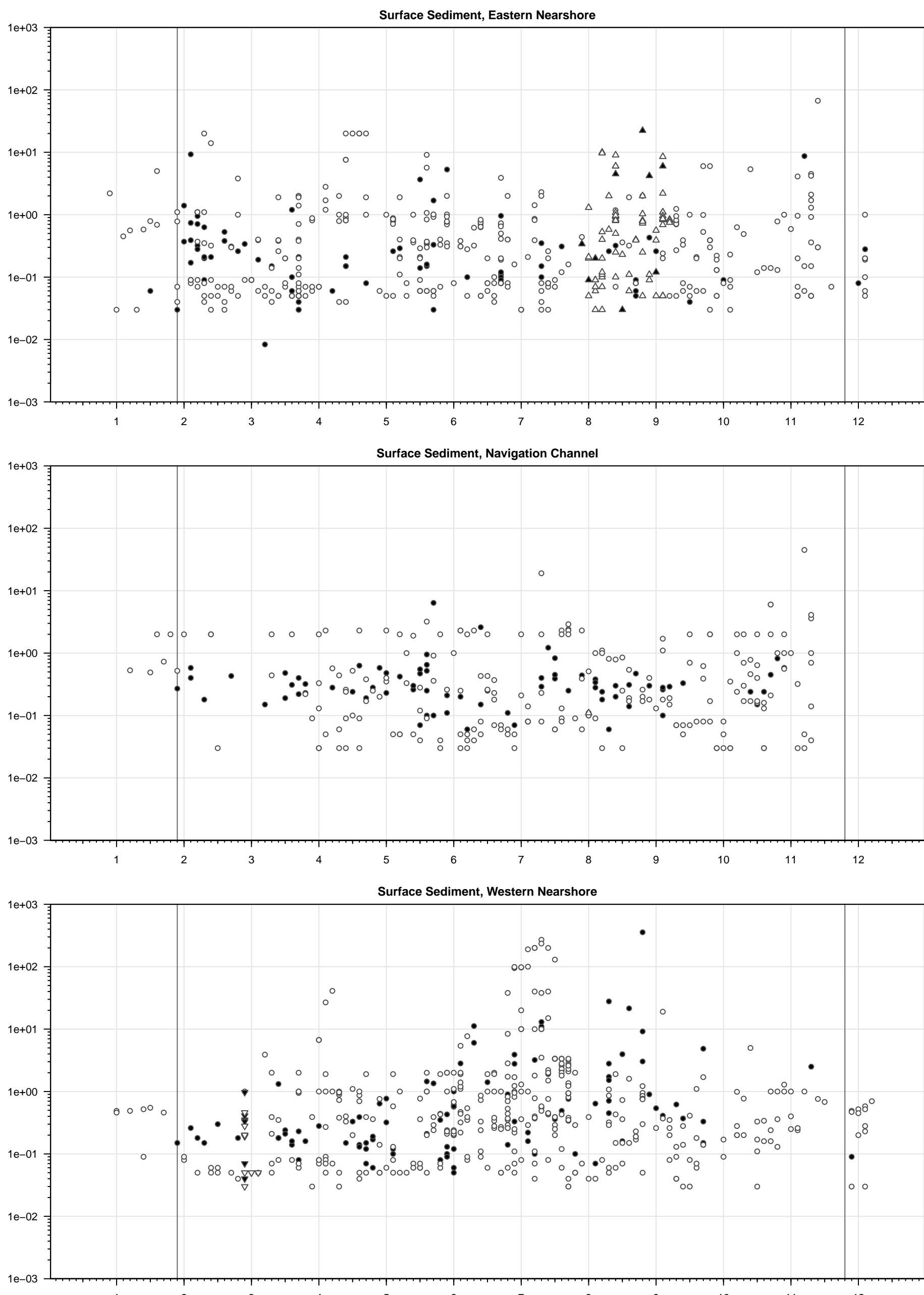
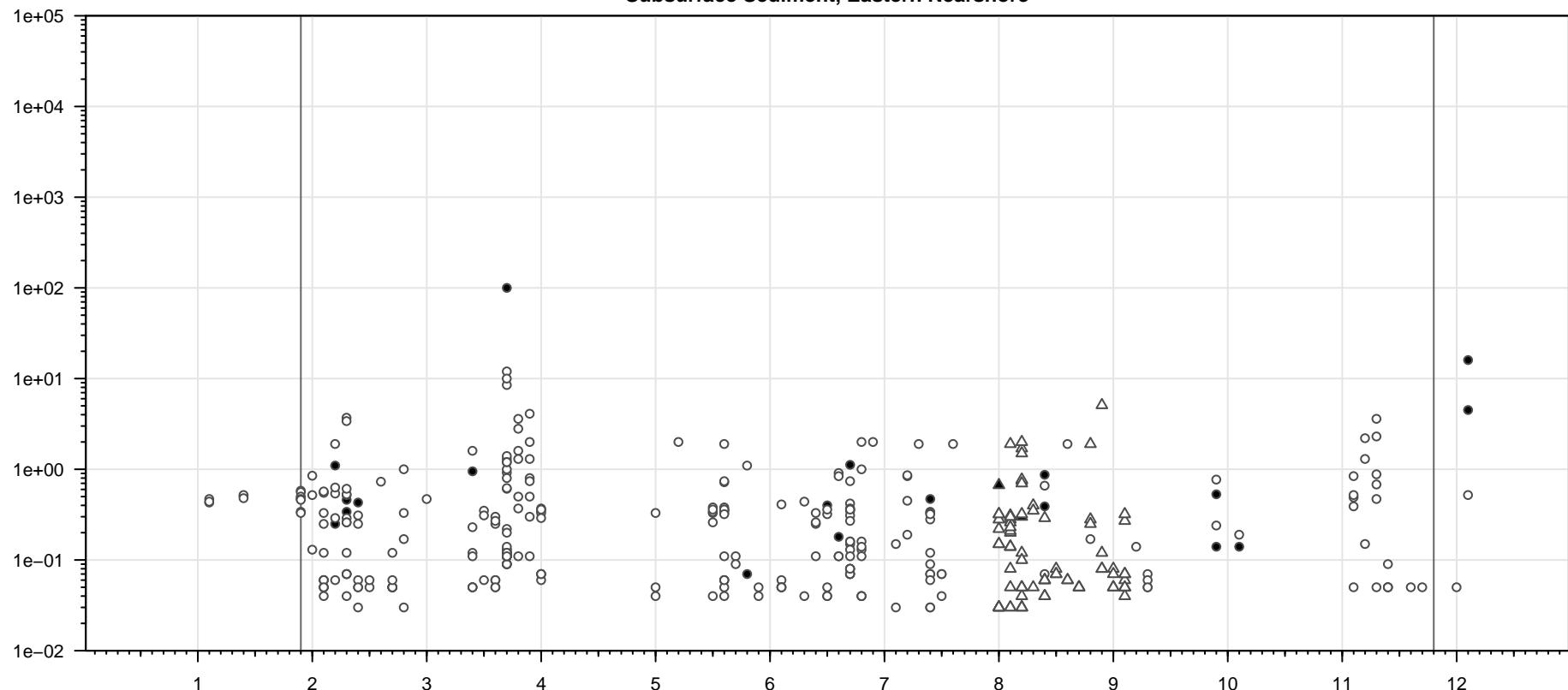
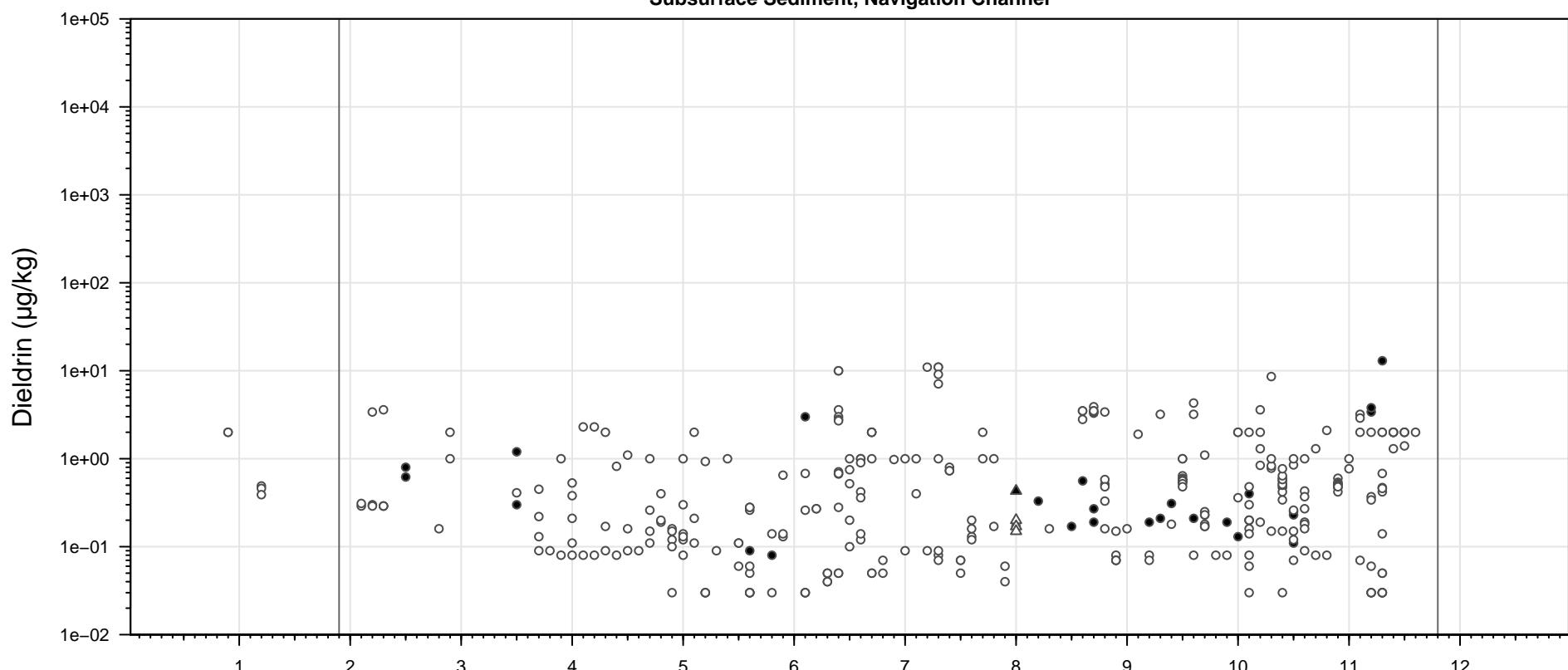


Figure 5.2-25
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Dieldrin
 Concentrations in Surface Sediment, RM 0.8–12.2

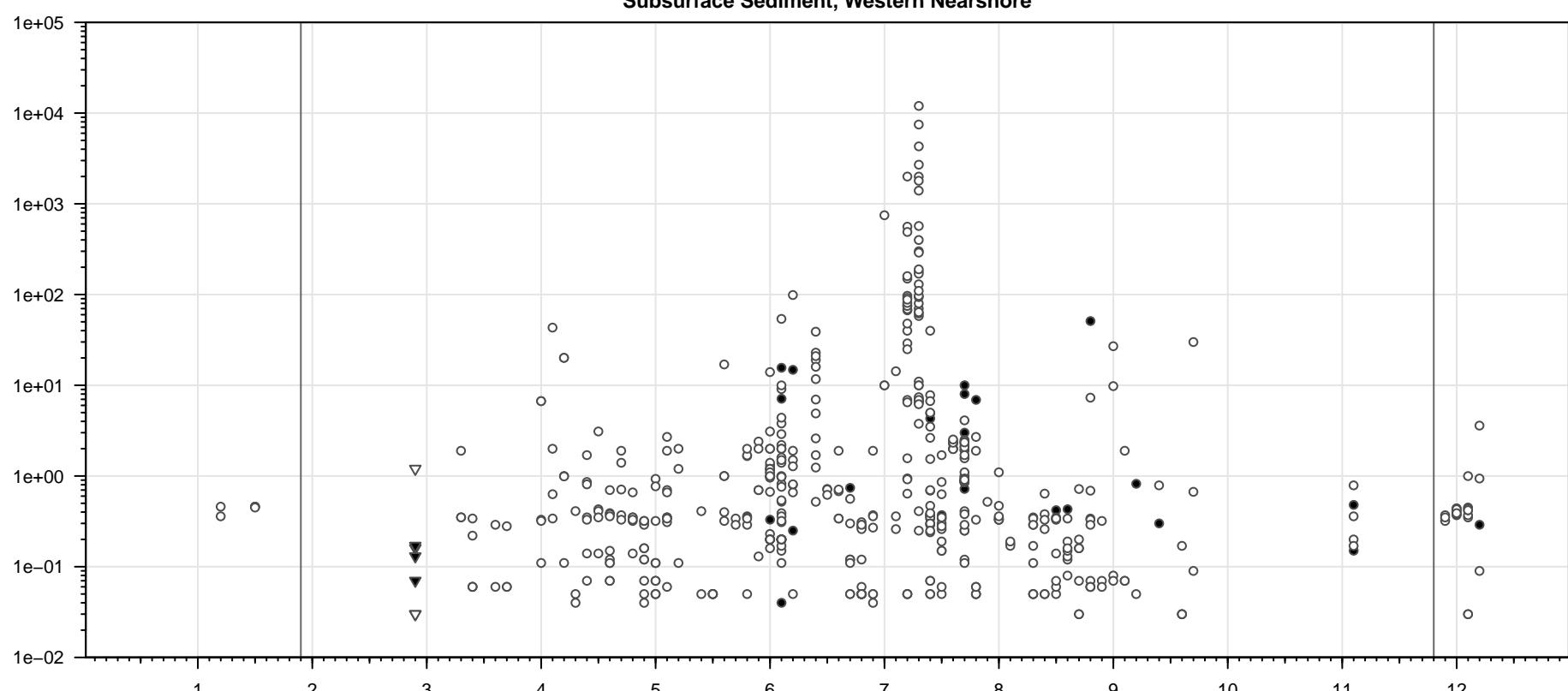
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

● River Bed
▲ Swan Island
▼ Multnomah Channel

● Detected
○ Non-Detected

Figure 5.2-26
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Dieldrin
Concentrations in Subsurface Sediment, RM 0.8–12.2

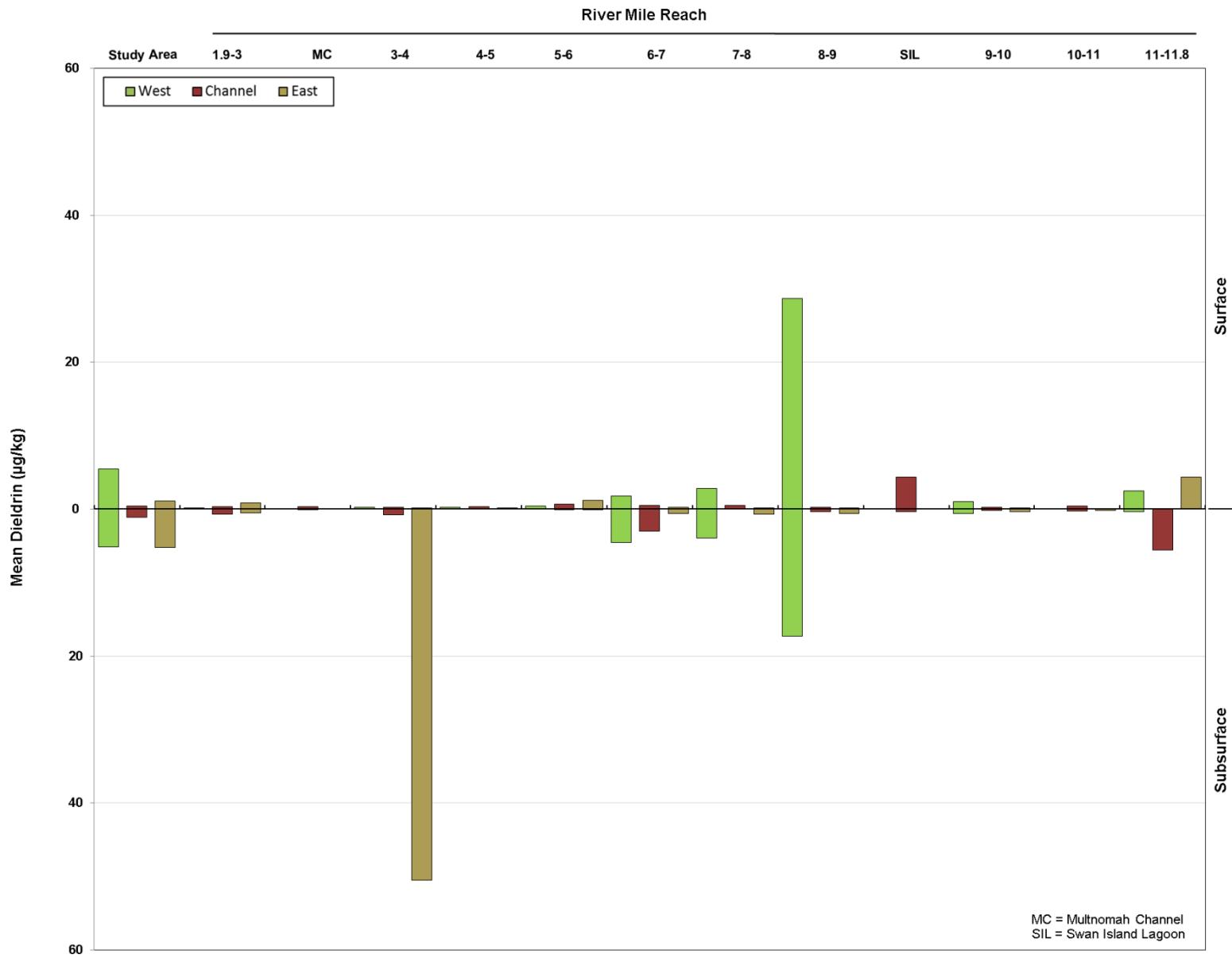


Figure 5.2-27
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Dieldrin Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

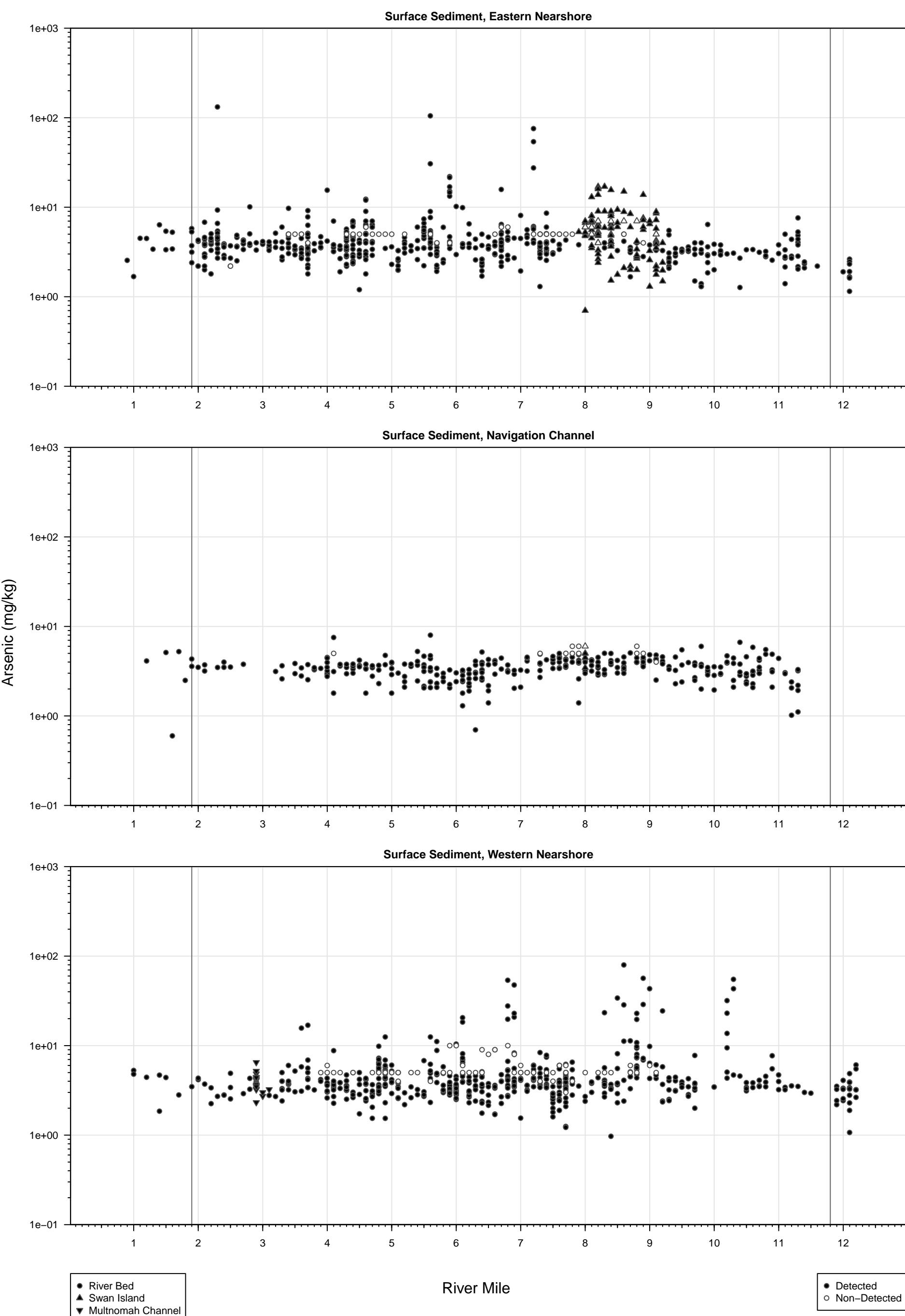
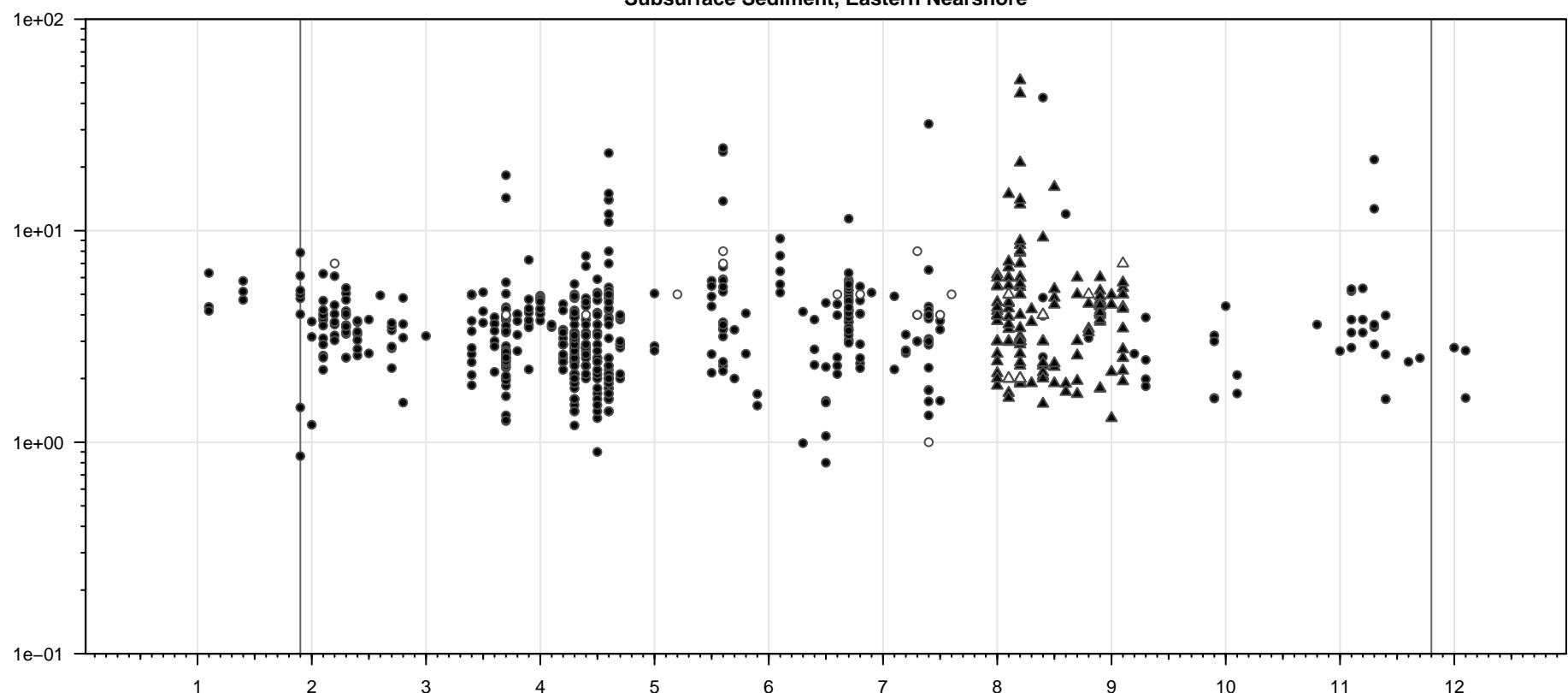
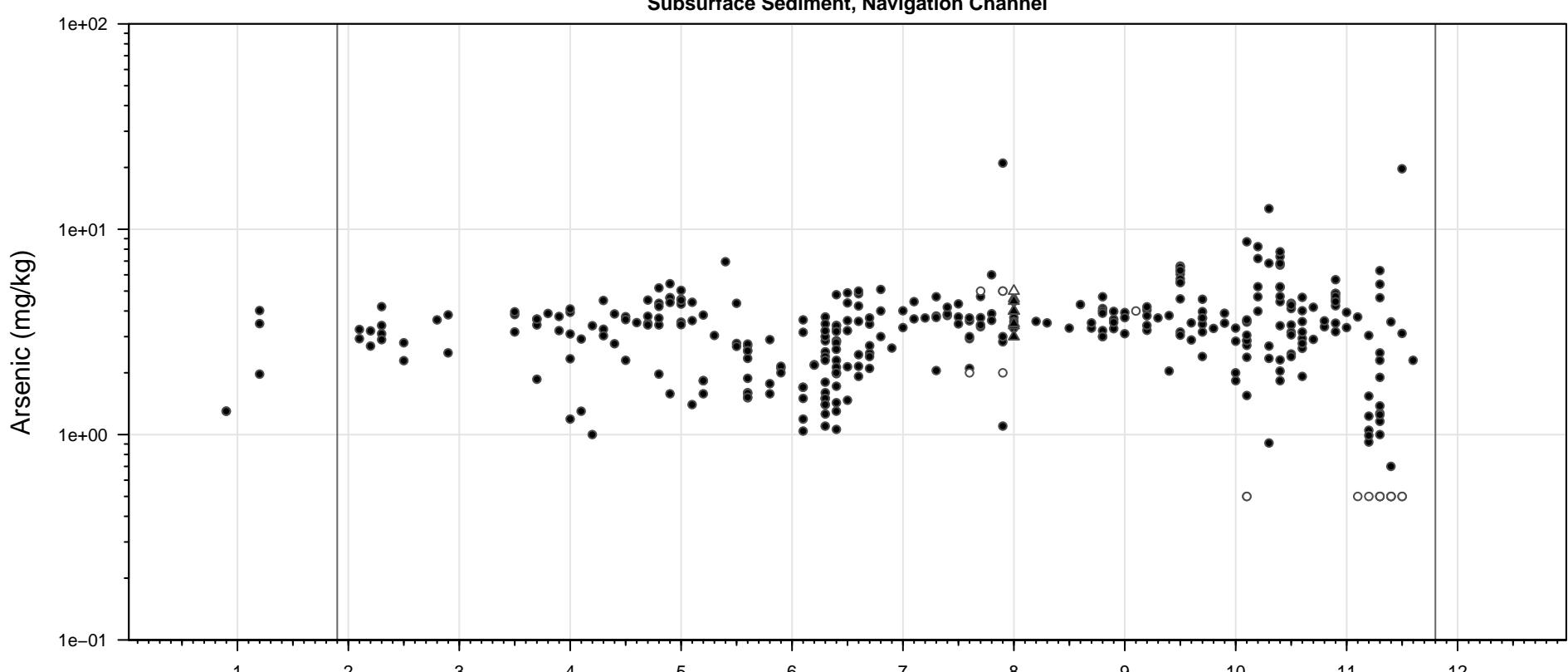


Figure 5.2-28
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Arsenic
 Concentrations in Surface Sediment, RM 0.8–12.2

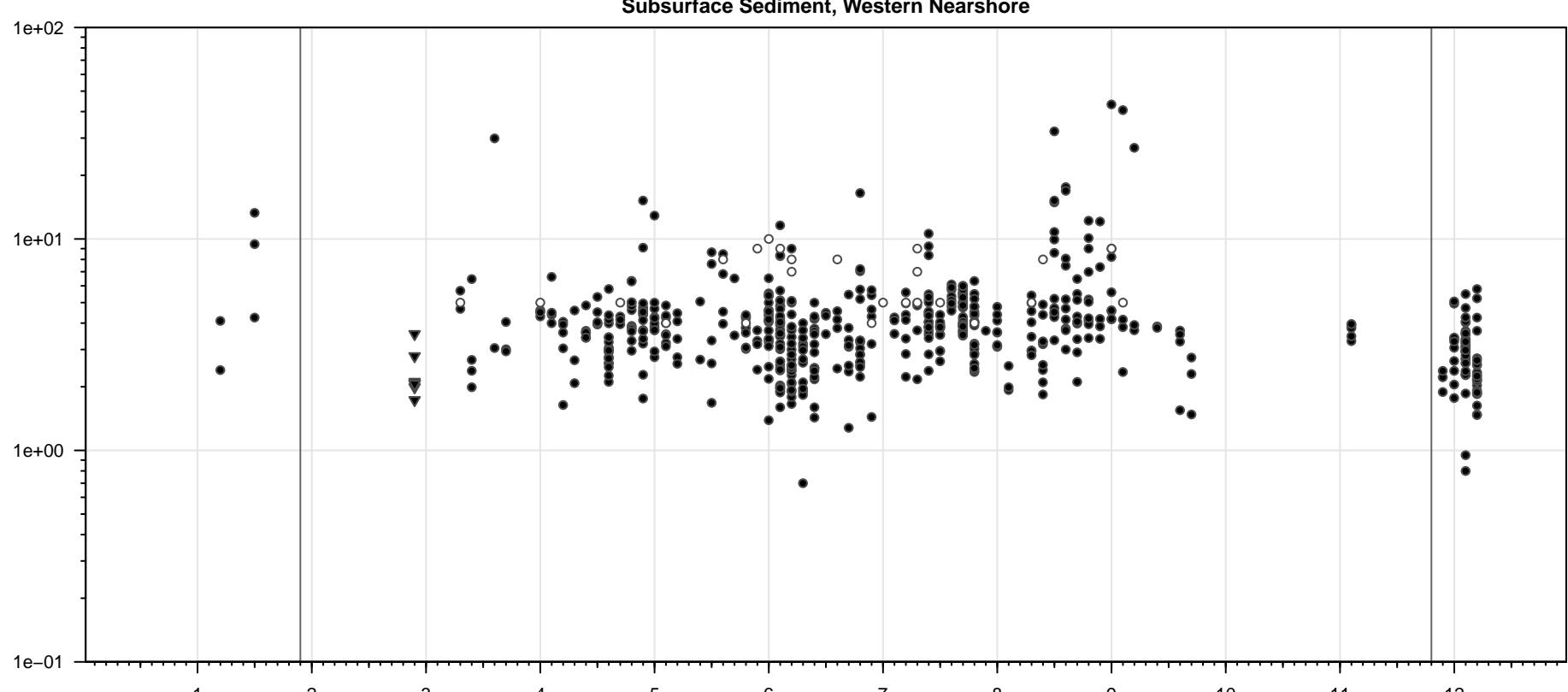
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

● River Bed
▲ Swan Island
▼ Multnomah Channel

● Detected
○ Non-Detected

Figure 5.2-29
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Arsenic
Concentrations in Subsurface Sediment, RM 0.8–12.2

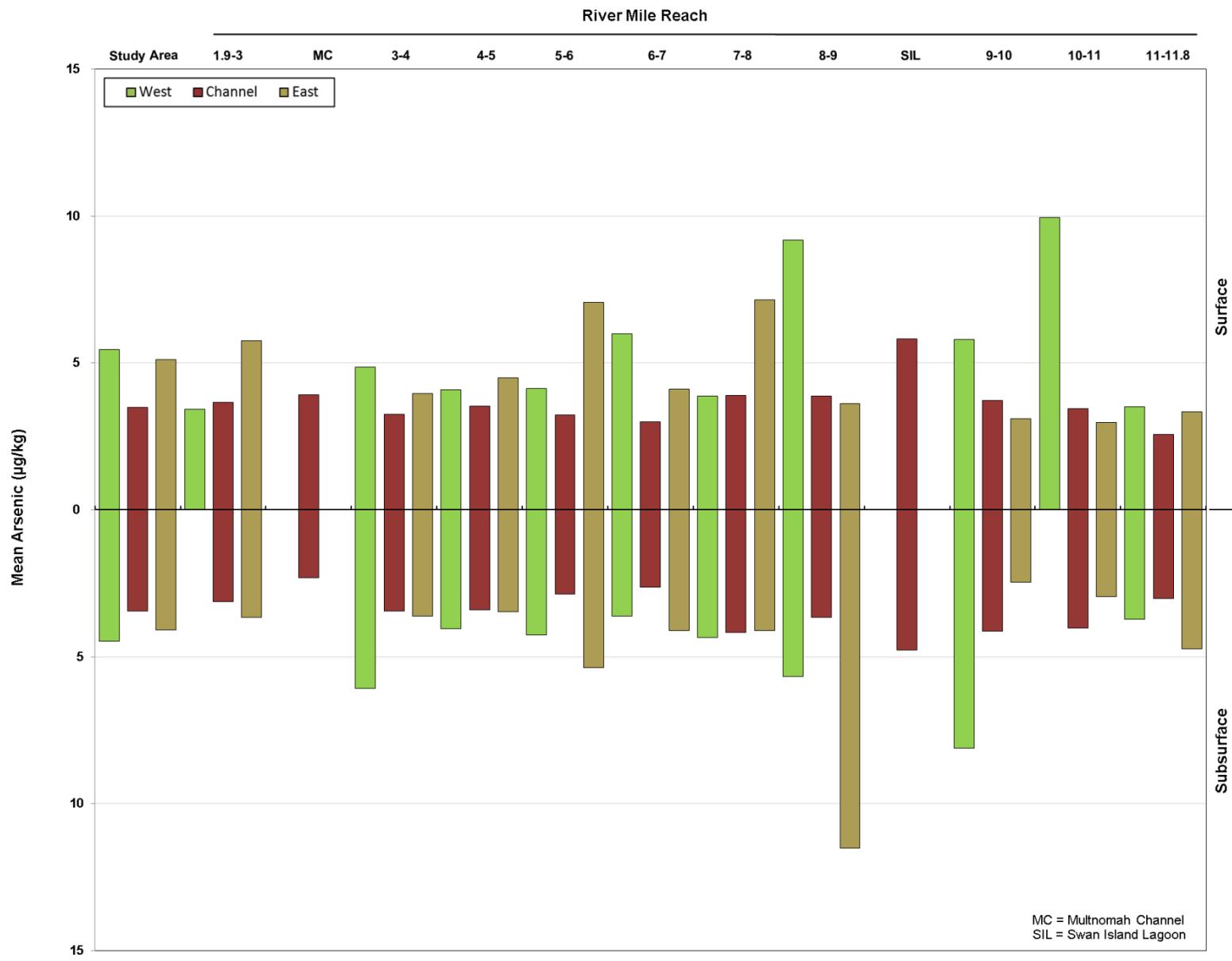
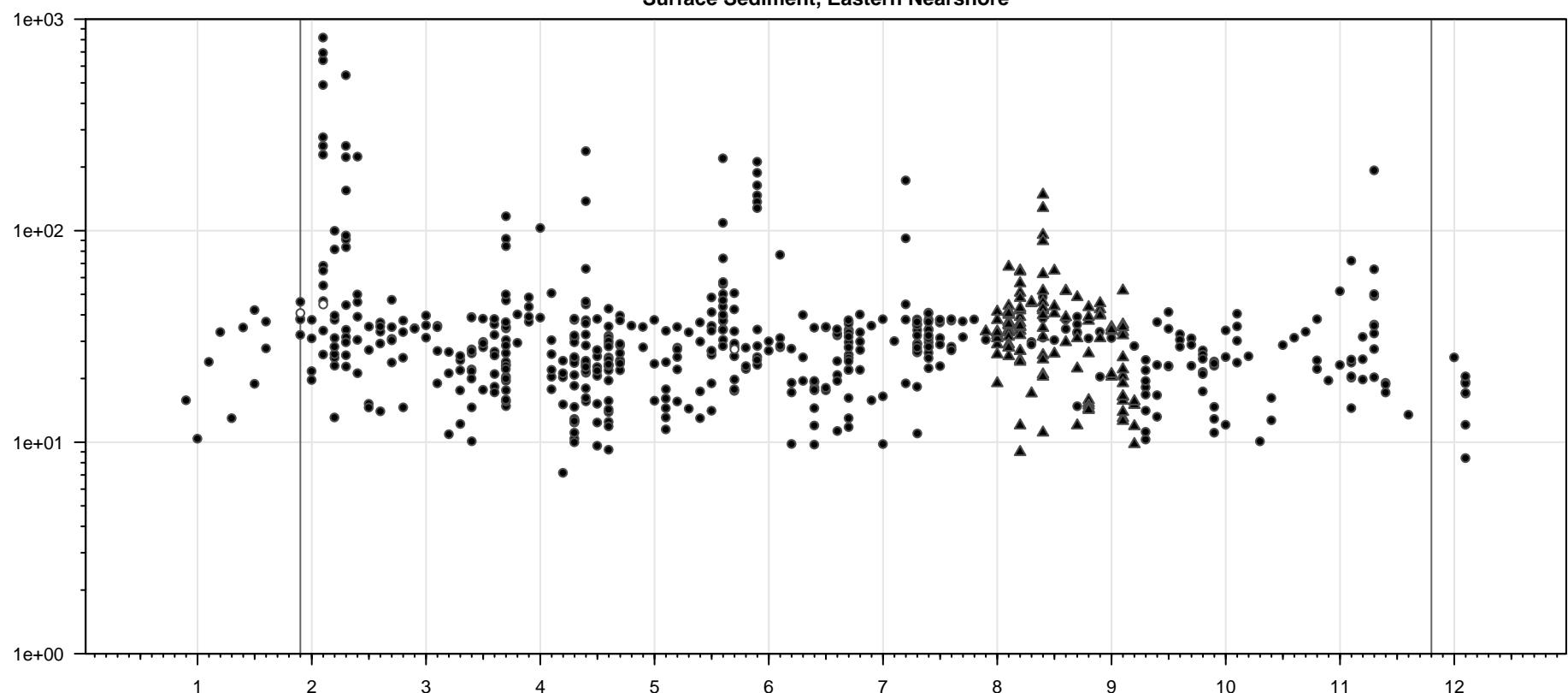
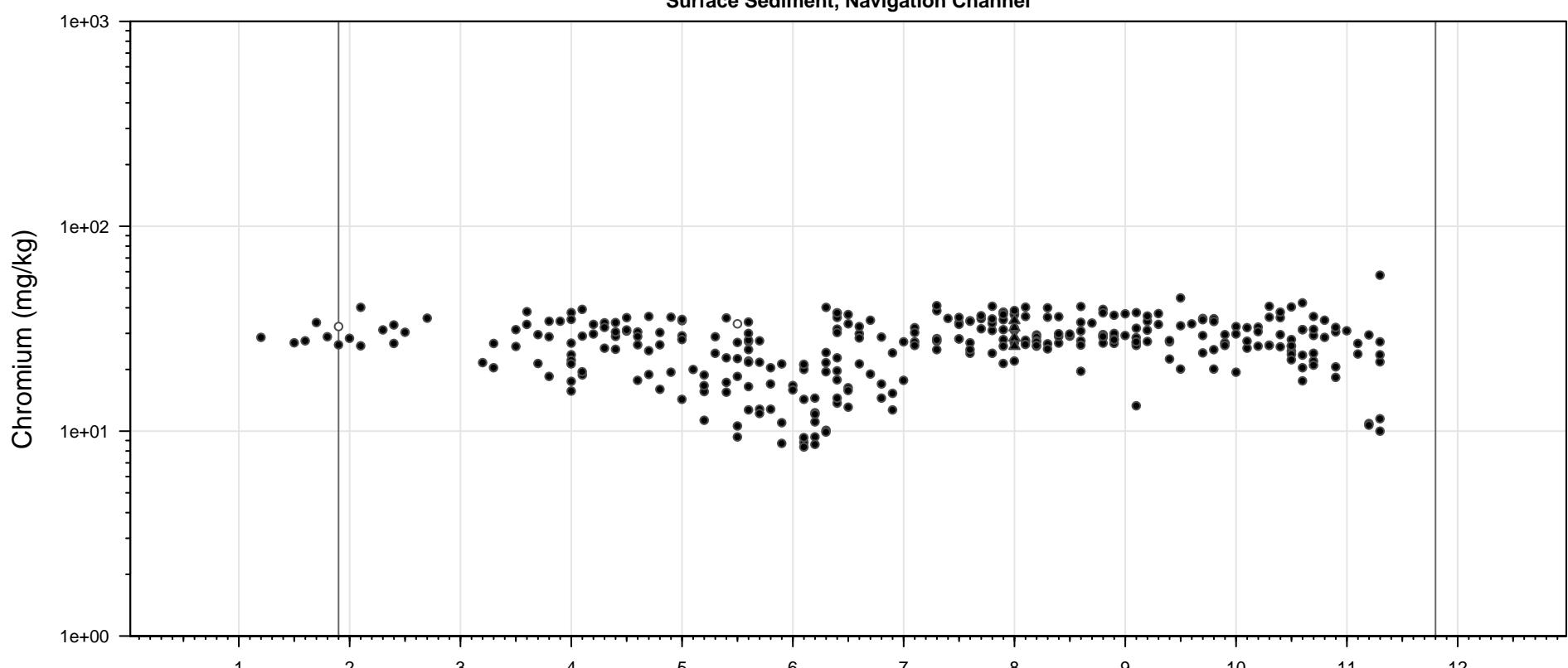


Figure 5.2-30
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Arsenic Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

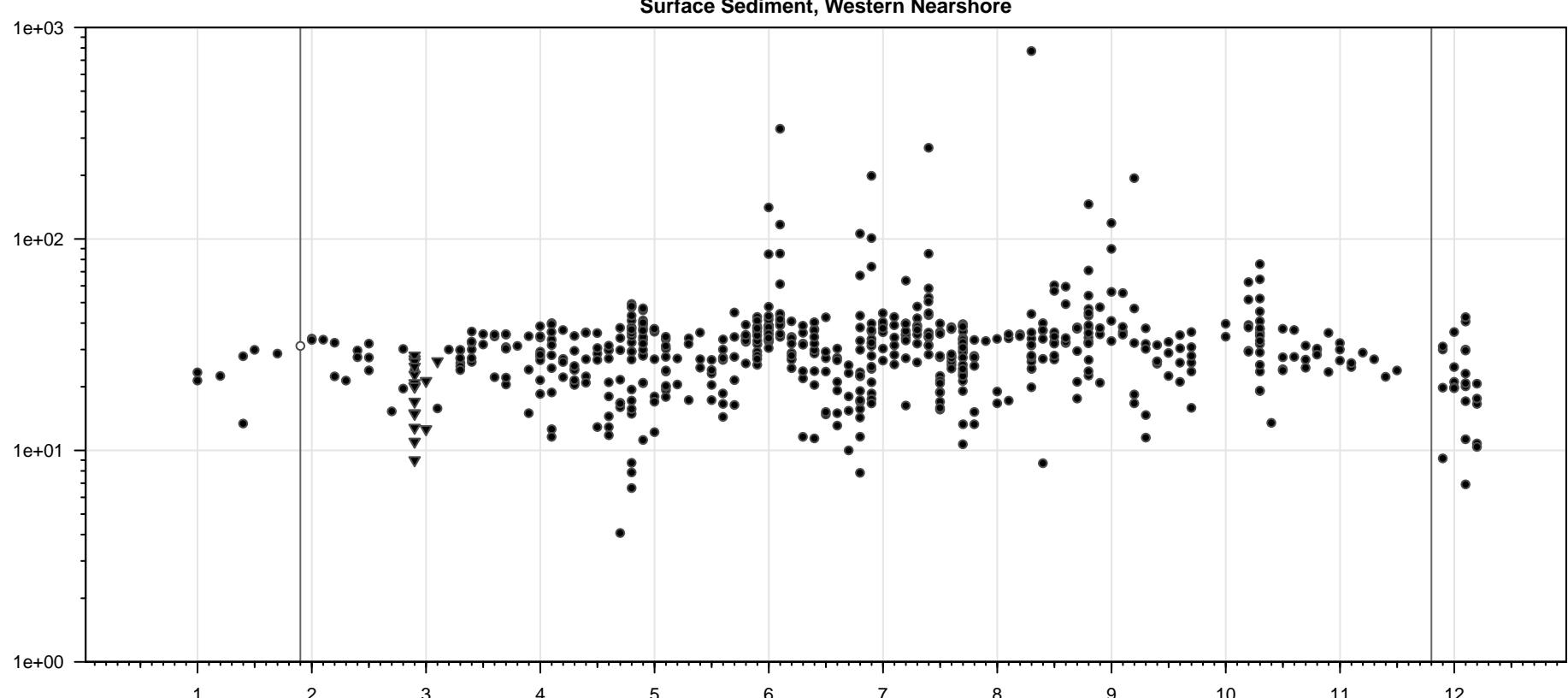
Surface Sediment, Eastern Nearshore



Surface Sediment, Navigation Channel



Surface Sediment, Western Nearshore



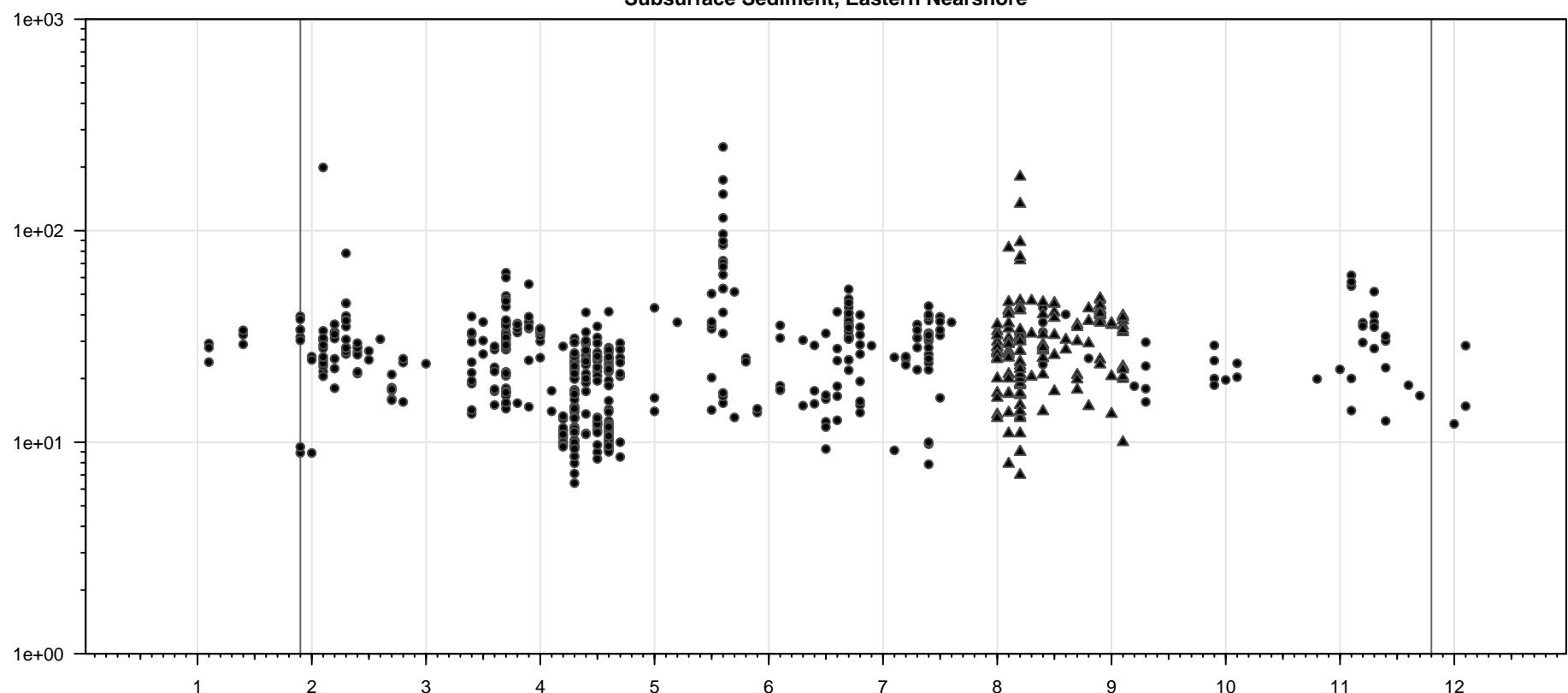
River Mile

● River Bed
▲ Swan Island
▼ Multnomah Channel

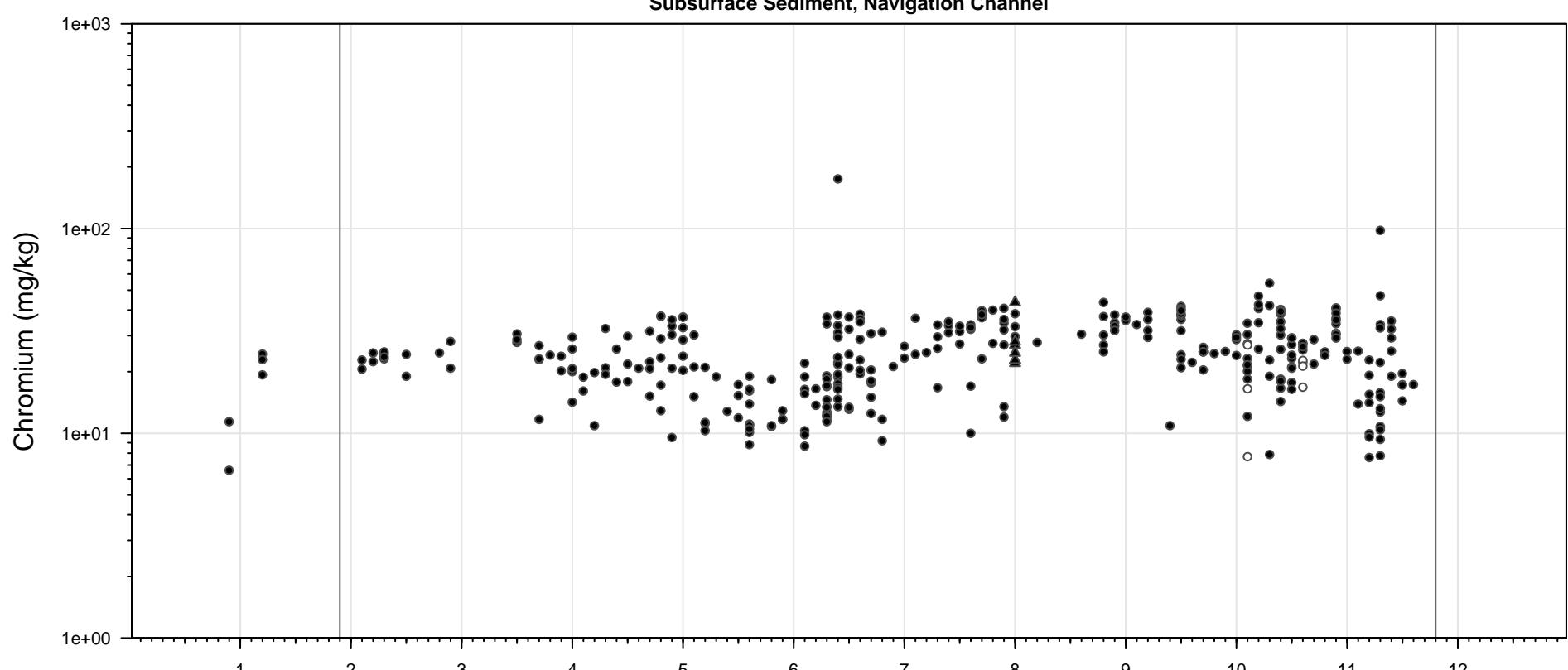
● Detected
○ Non-Detected

Figure 5.2-31
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Chromium
Concentrations in Surface Sediment, RM 0.8–12.2

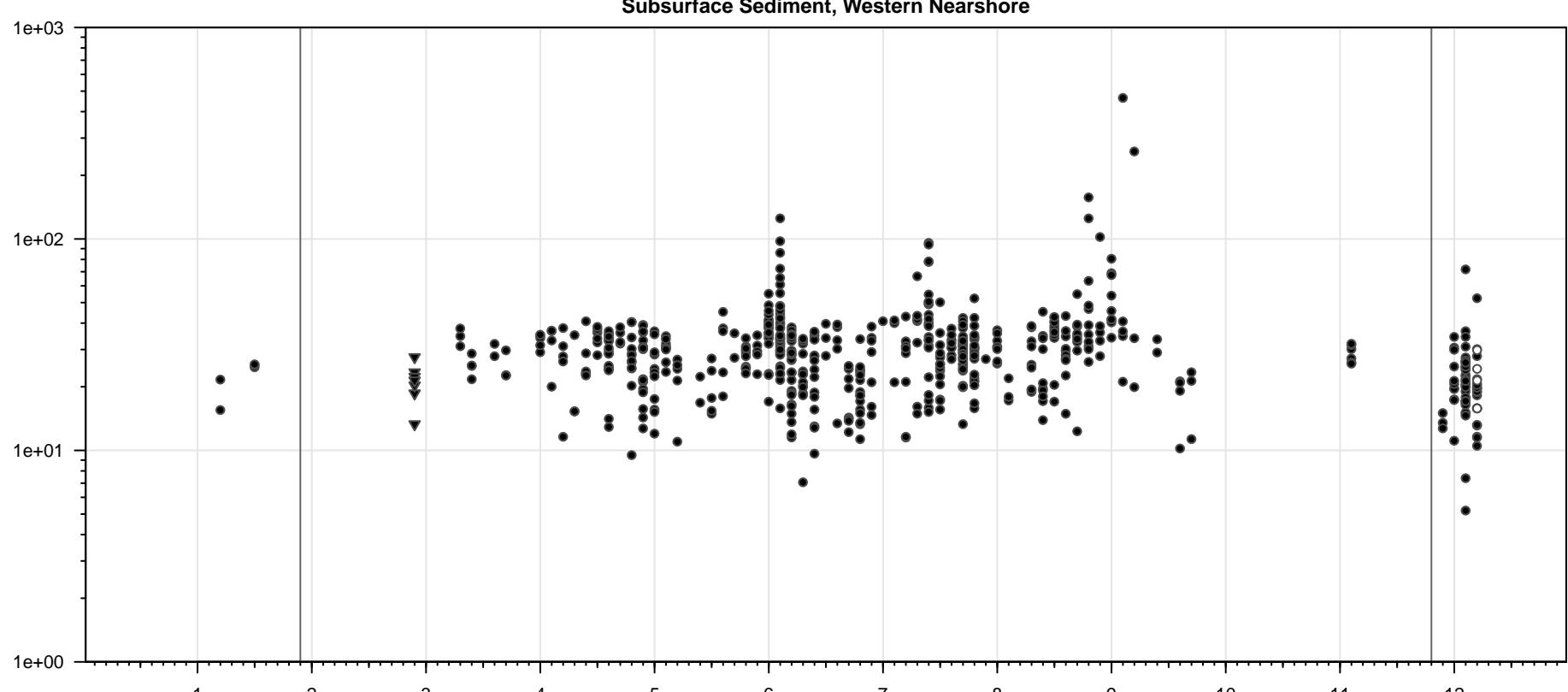
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

● River Bed
▲ Swan Island
▼ Multnomah Channel

● Detected
○ Non-Detected

Figure 5.2-32
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Chromium
Concentrations in Subsurface Sediment, RM 0.8–12.2

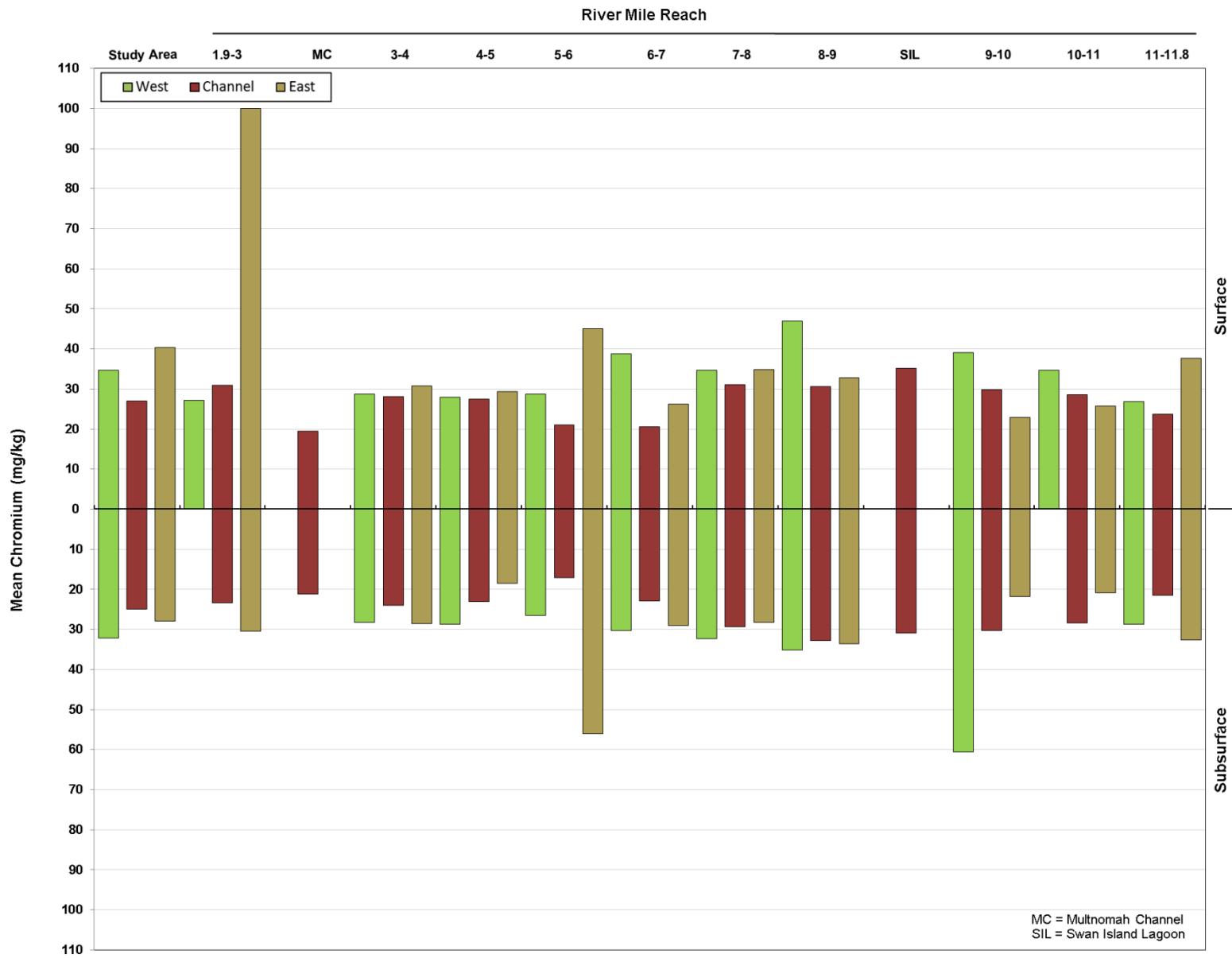


Figure 5.2-33
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Chromium Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

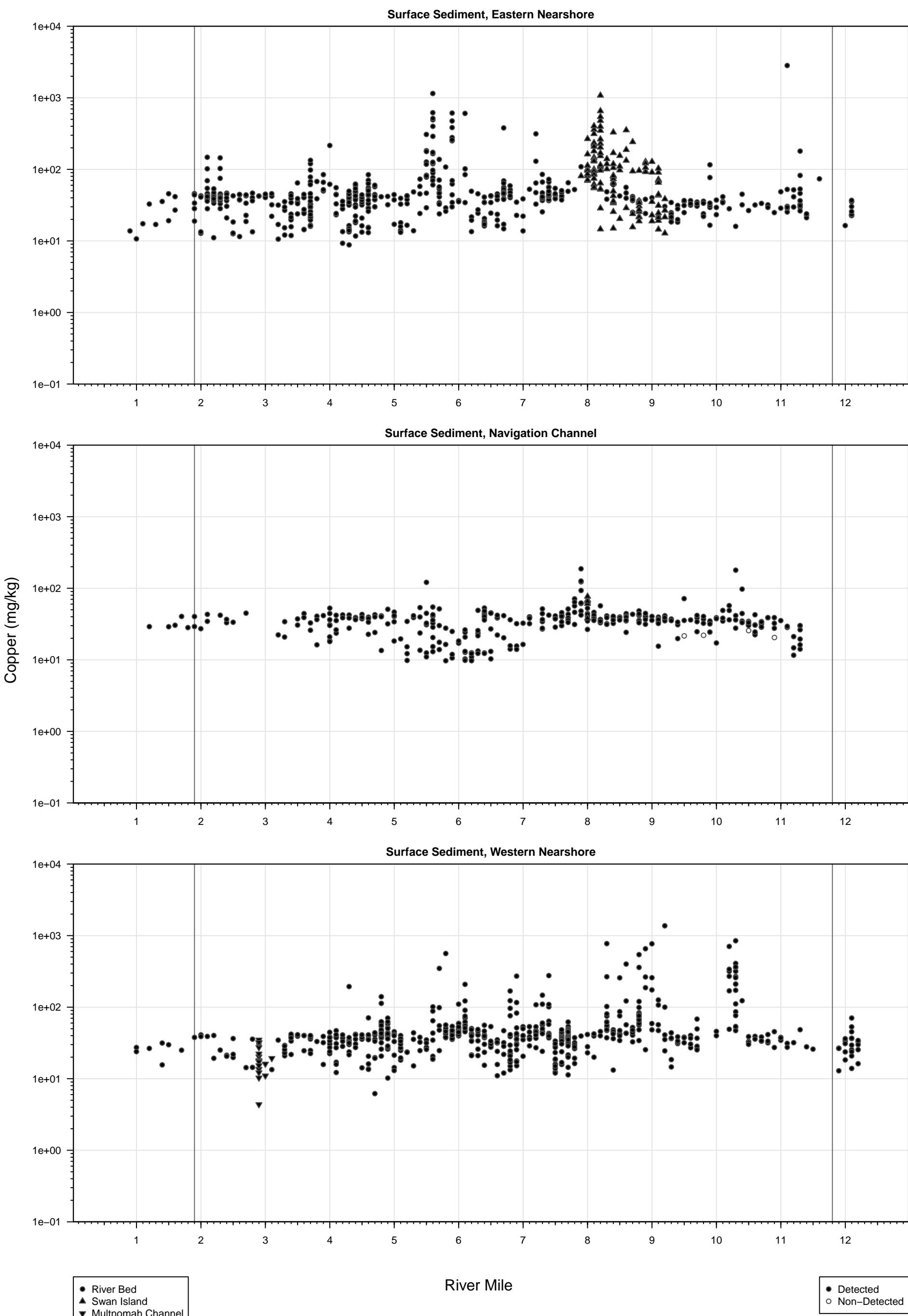
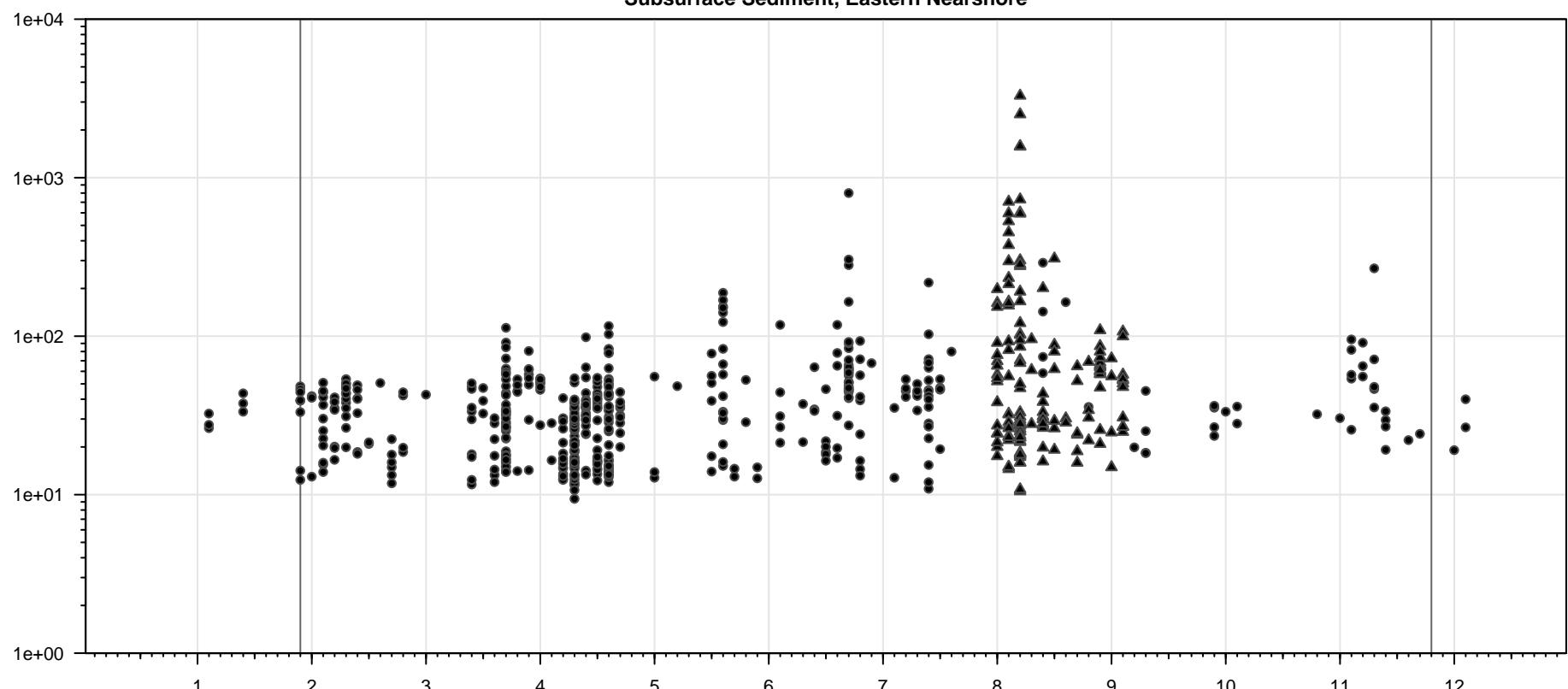
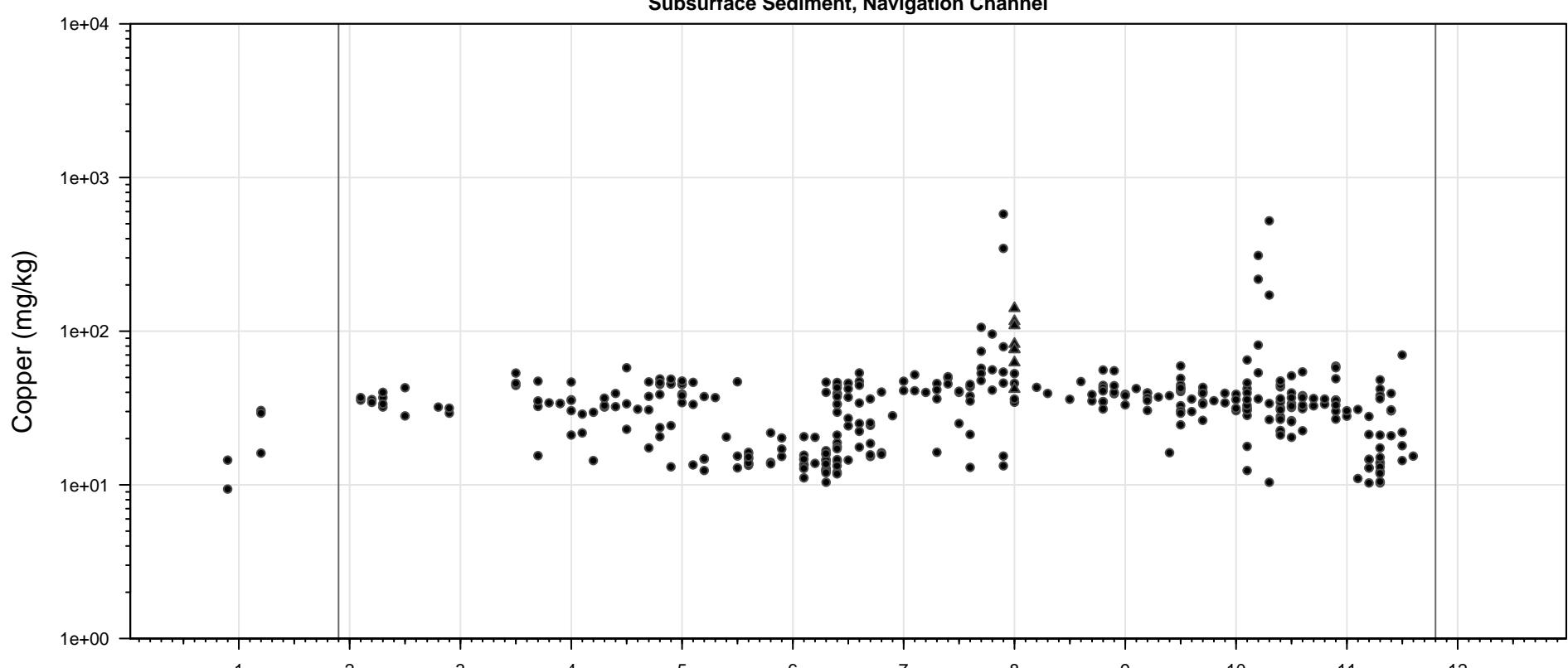


Figure 5.2-34
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Copper
Concentrations in Surface Sediment, RM 0.8–12.2

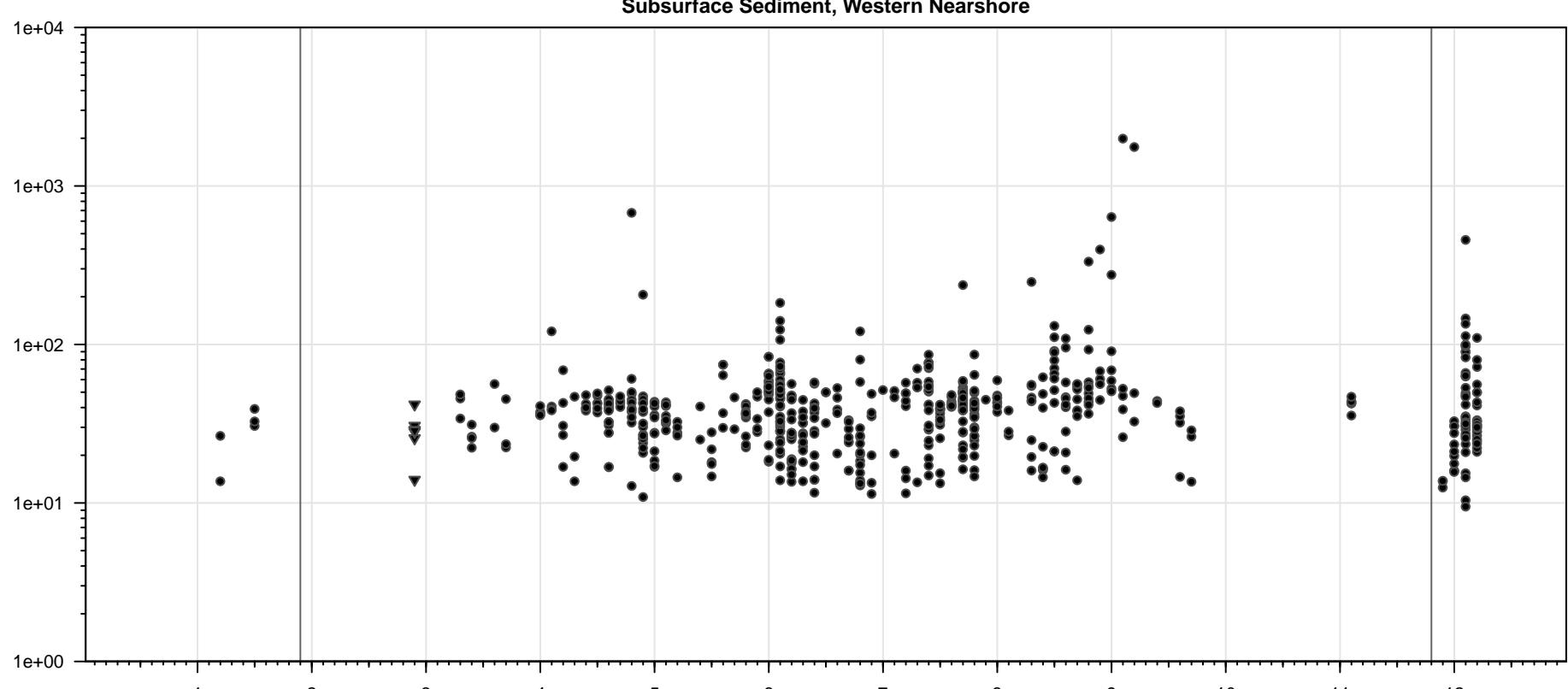
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

● River Bed
▲ Swan Island
▼ Multnomah Channel

● Detected
○ Non-Detected

Figure 5.2-35
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Copper
Concentrations in Subsurface Sediment, RM 0.8–12.2

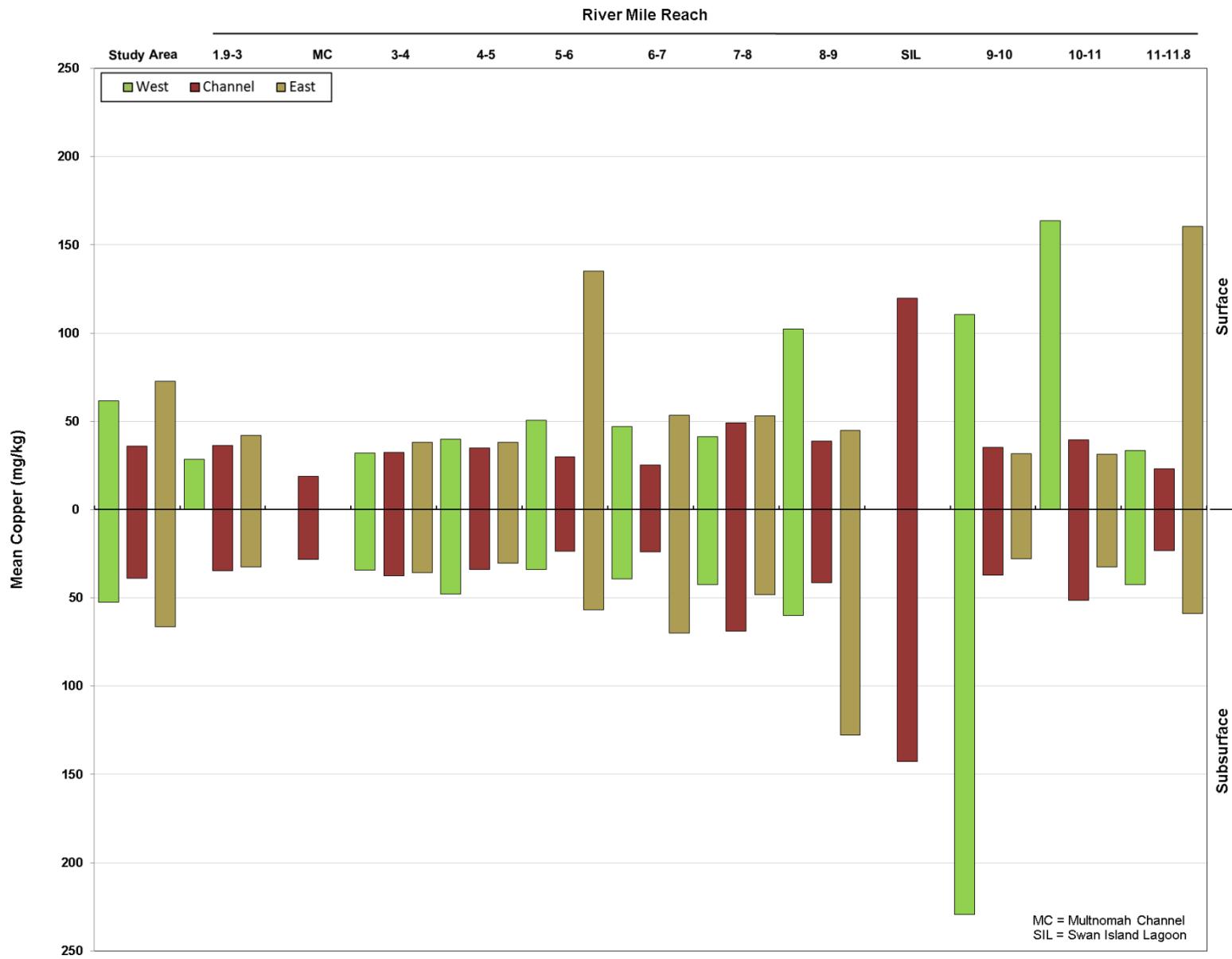


Figure 5.2-36
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Copper Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

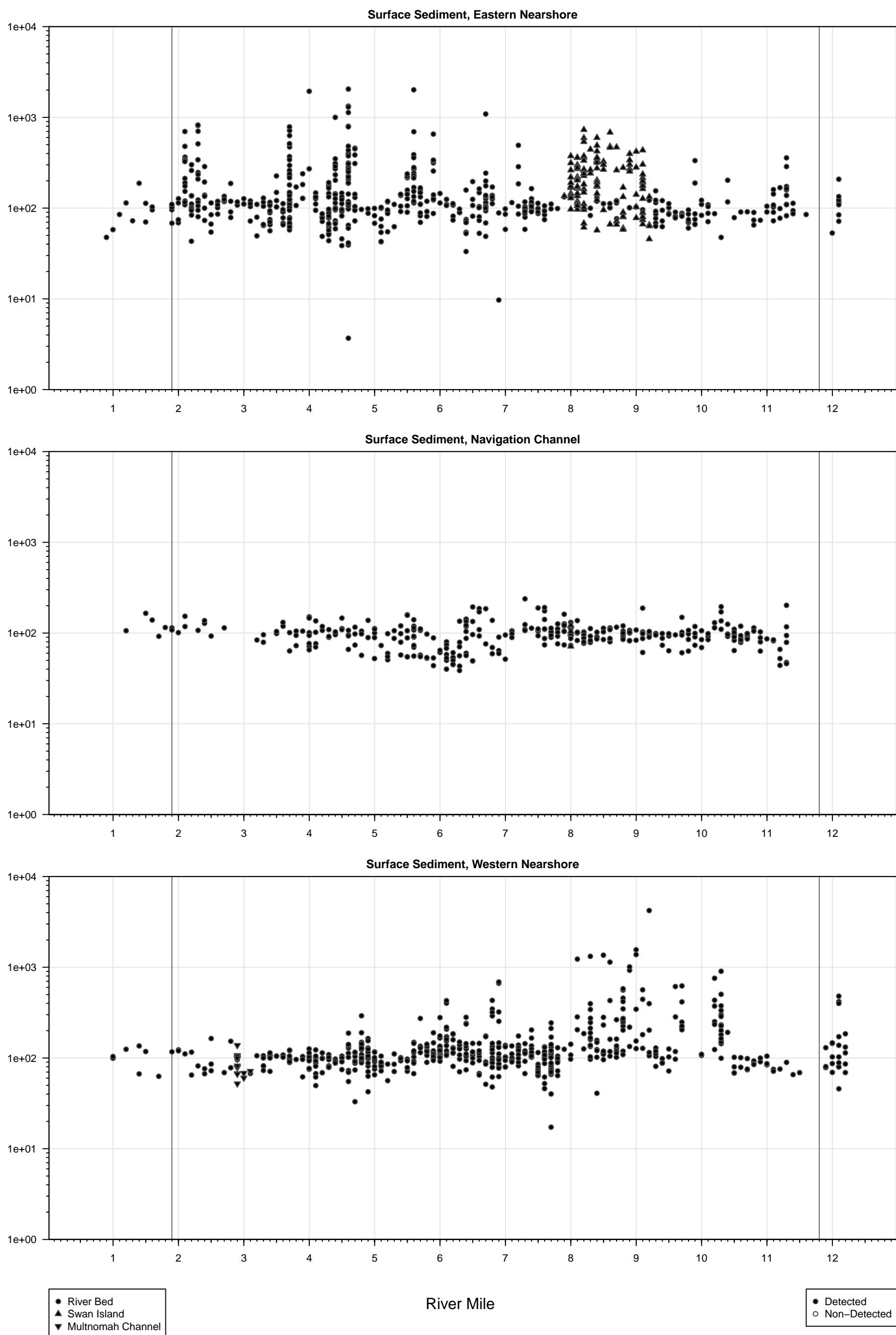
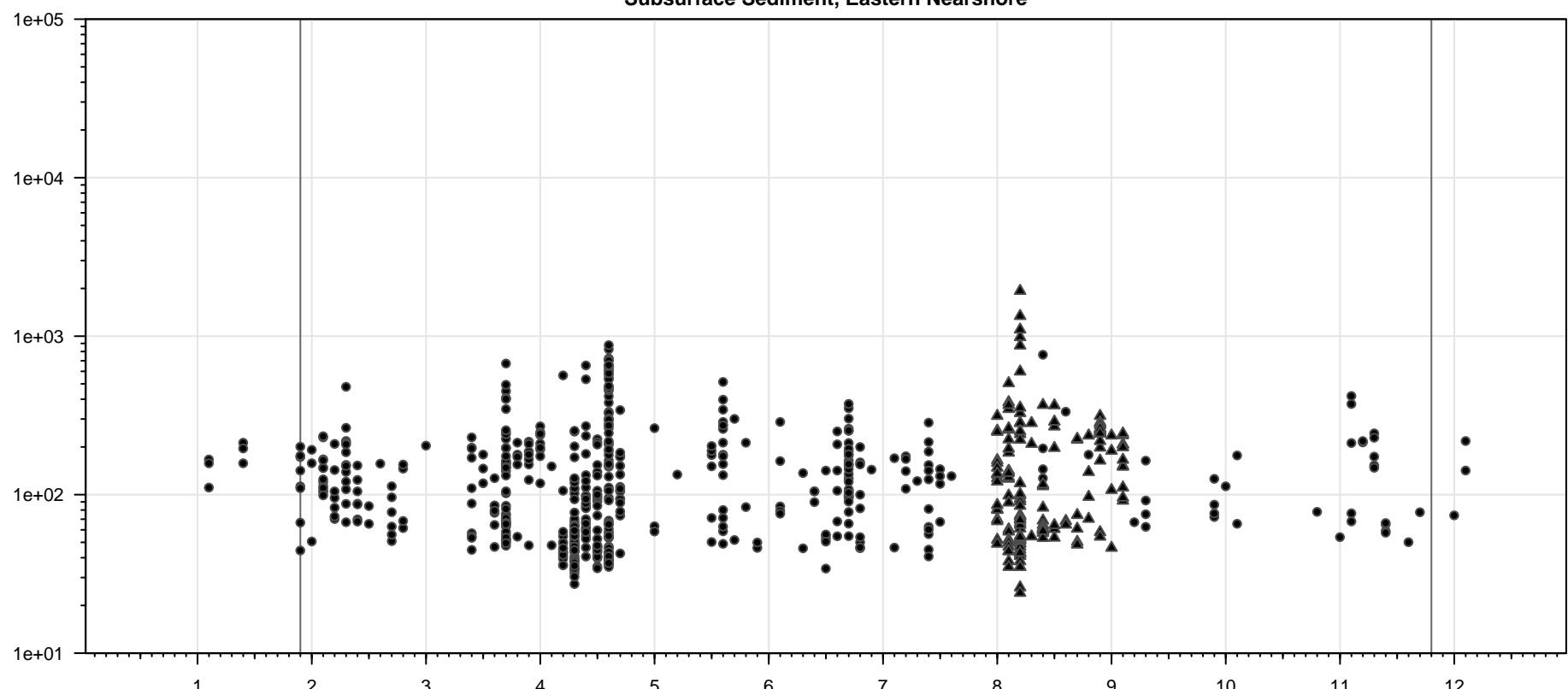
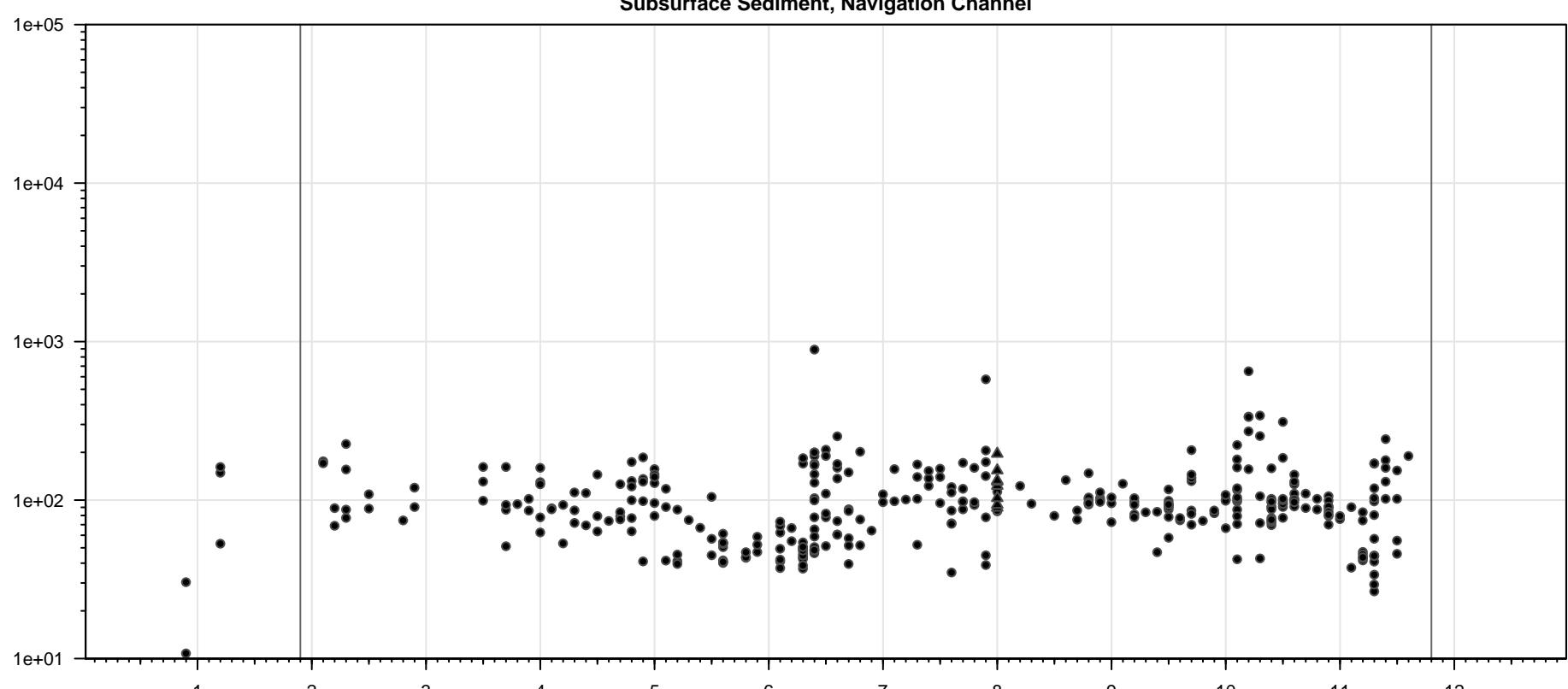


Figure 5.2-37
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Zinc
 Concentrations in Surface Sediment, RM 0.8–12.2

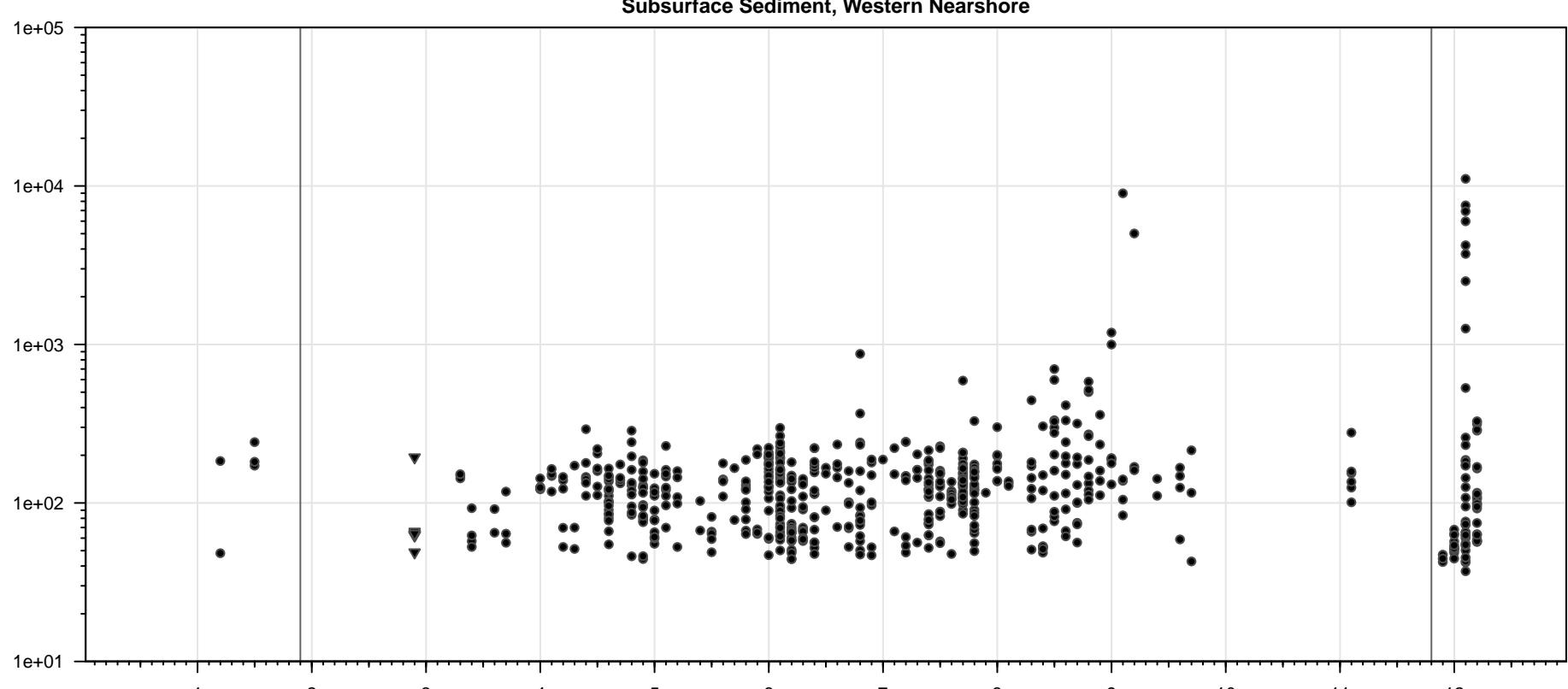
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

- Detected
- Non-Detected

Figure 5.2-38
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Zinc
Concentrations in Subsurface Sediment, RM 0.8–12.2

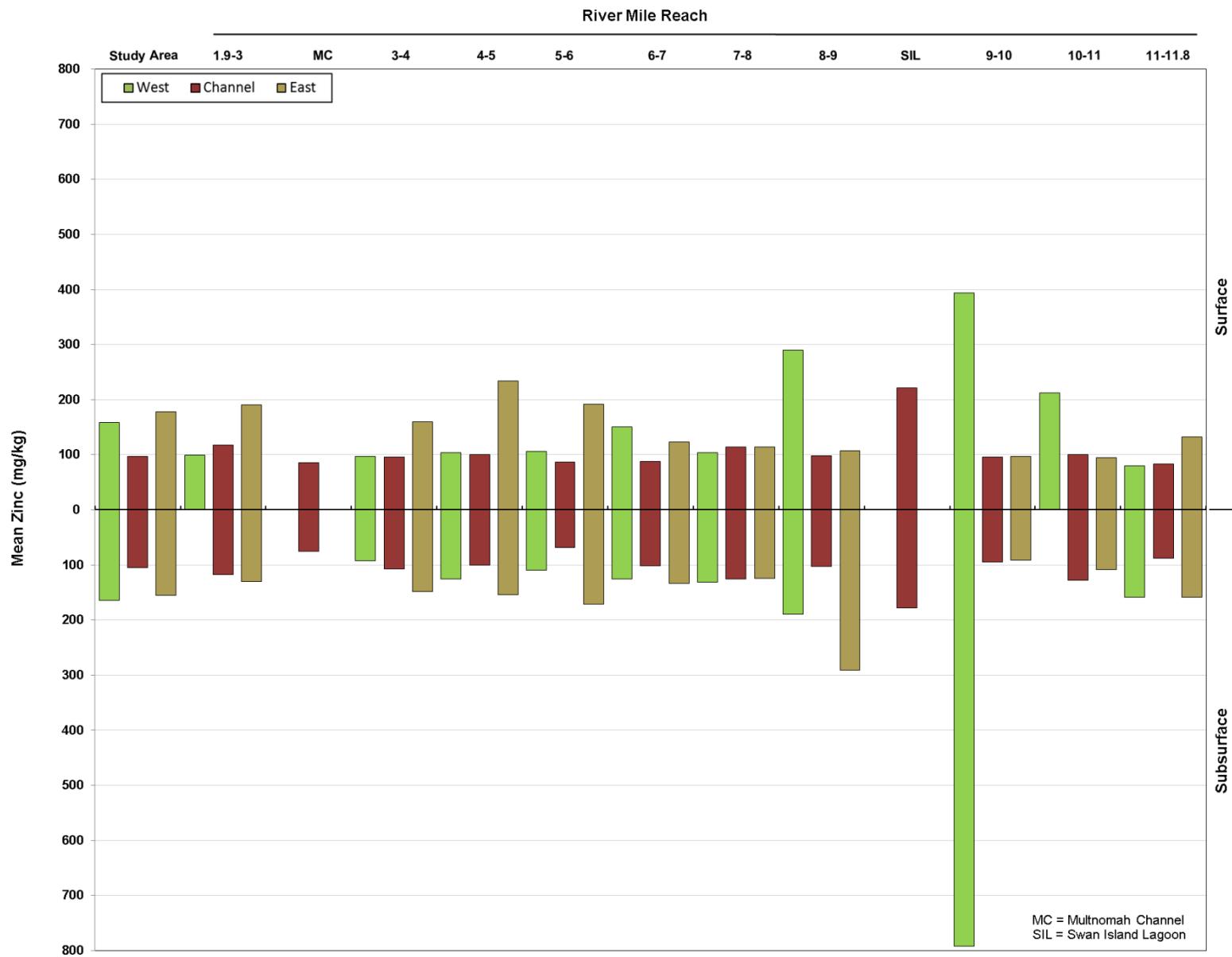


Figure 5.2-39
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Mean Zinc Concentration
 in Surface and Subsurface Sediment (RM 1.9–11.8)

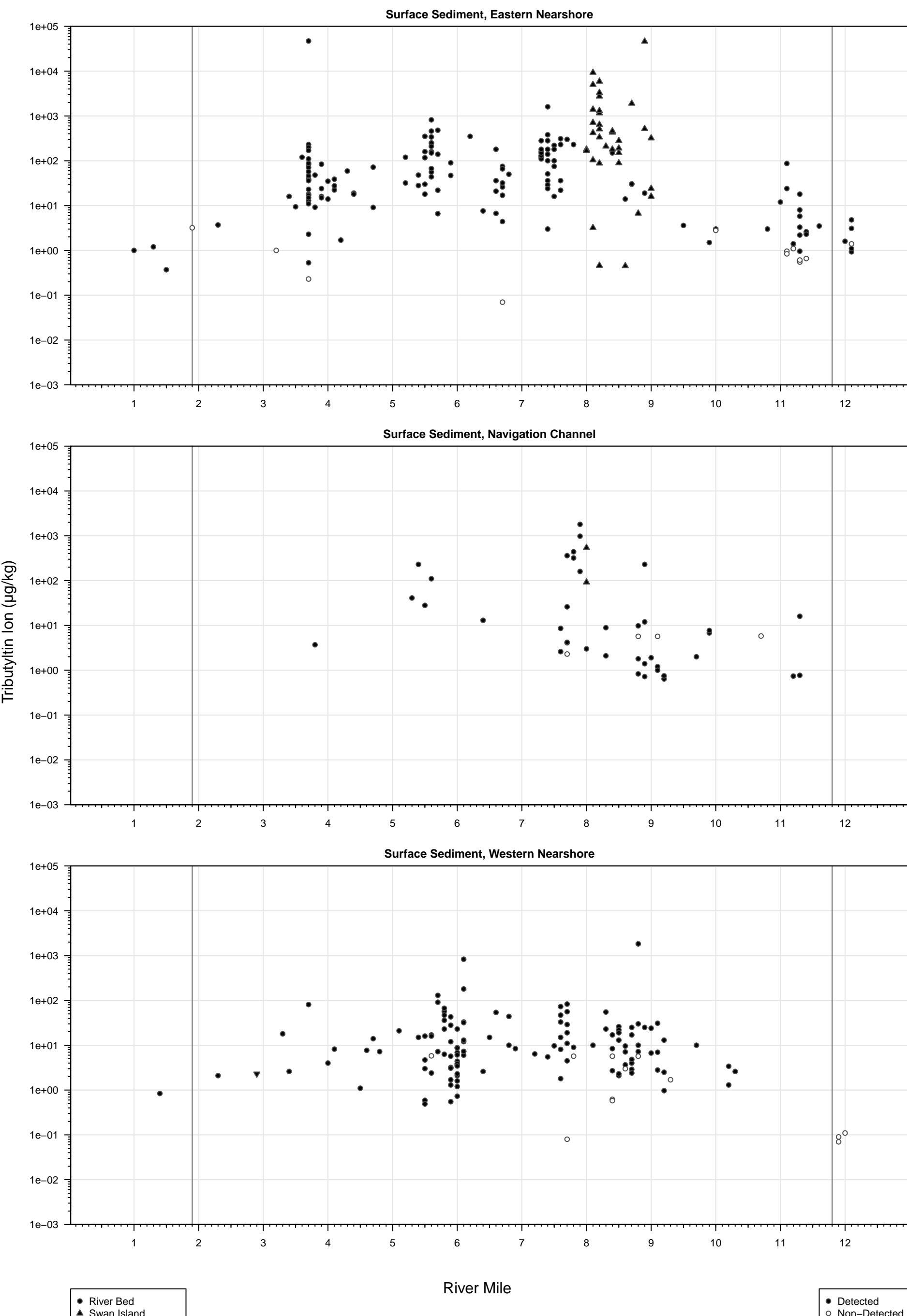
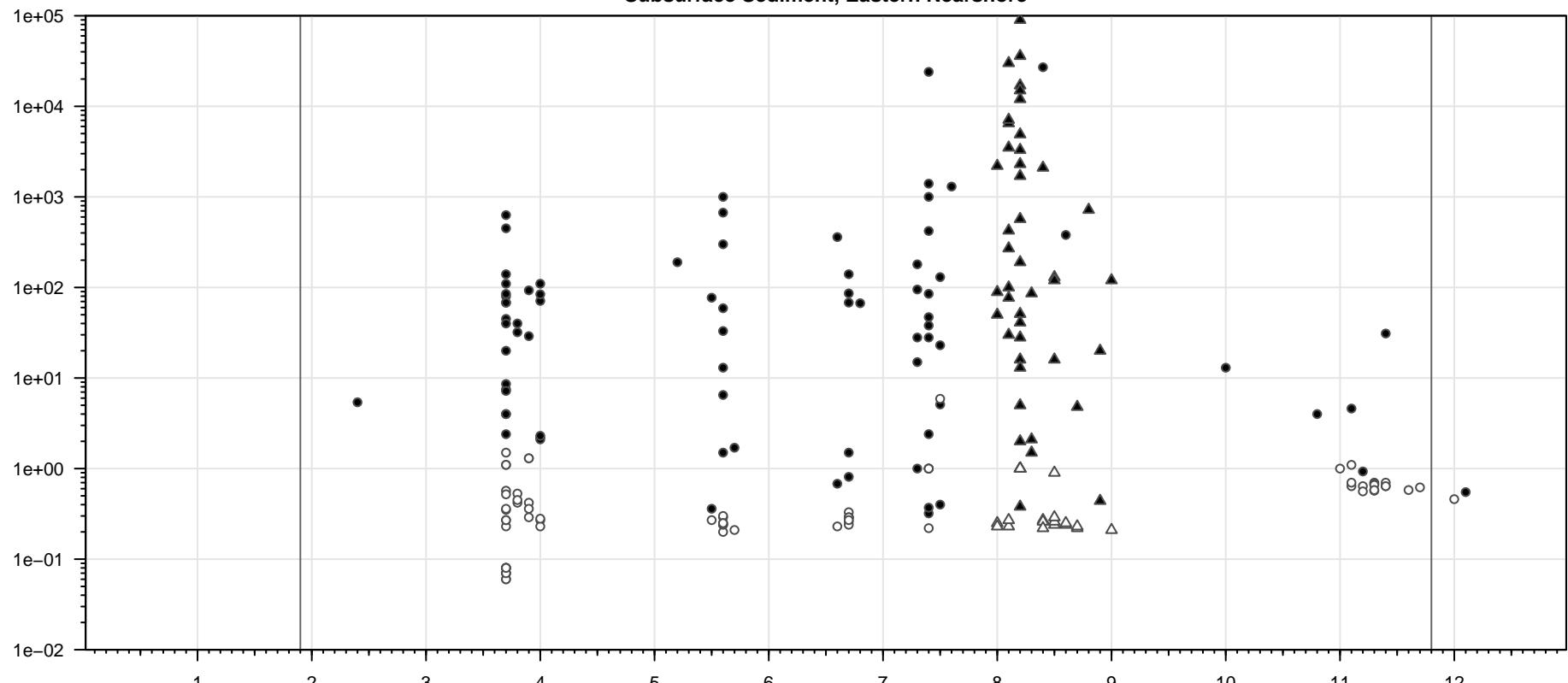
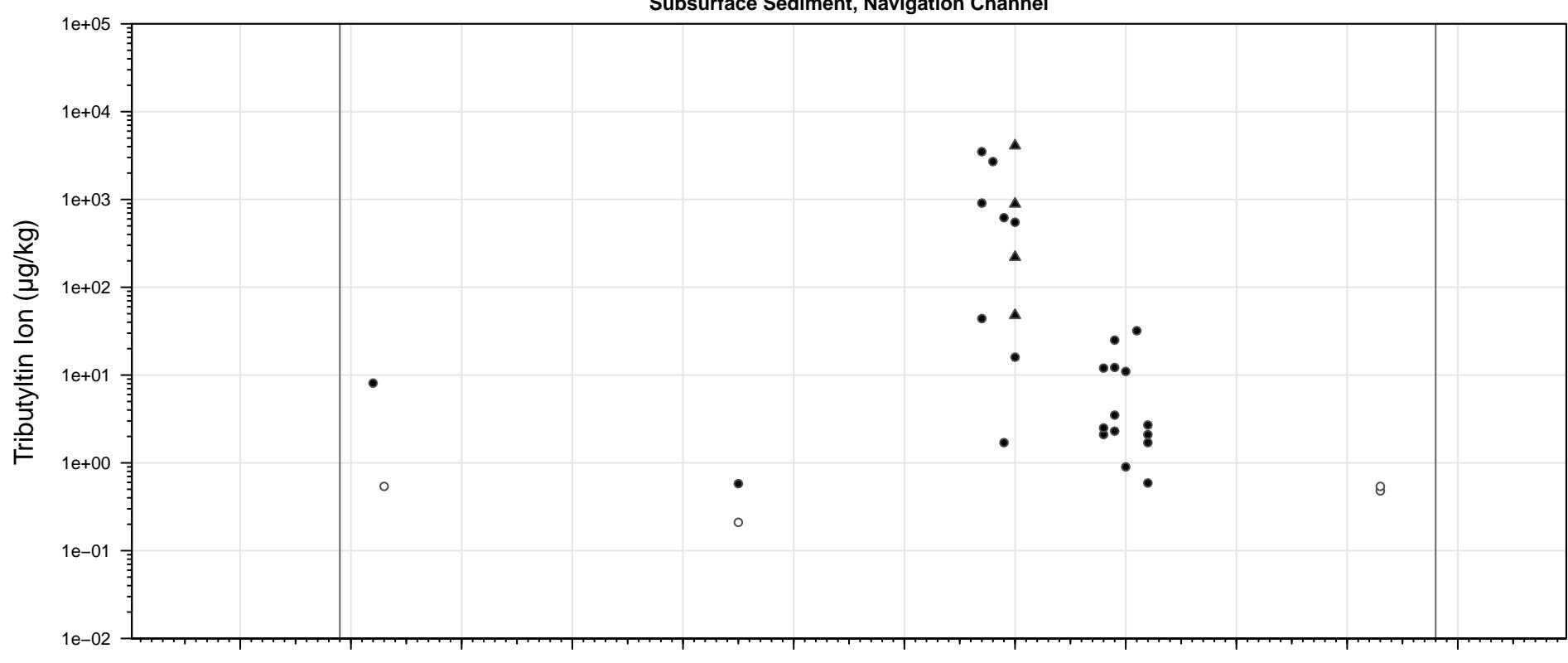


Figure 5.2-40
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Tributyltin Ion
 Concentrations in Surface Sediment, RM 0.8–12.2

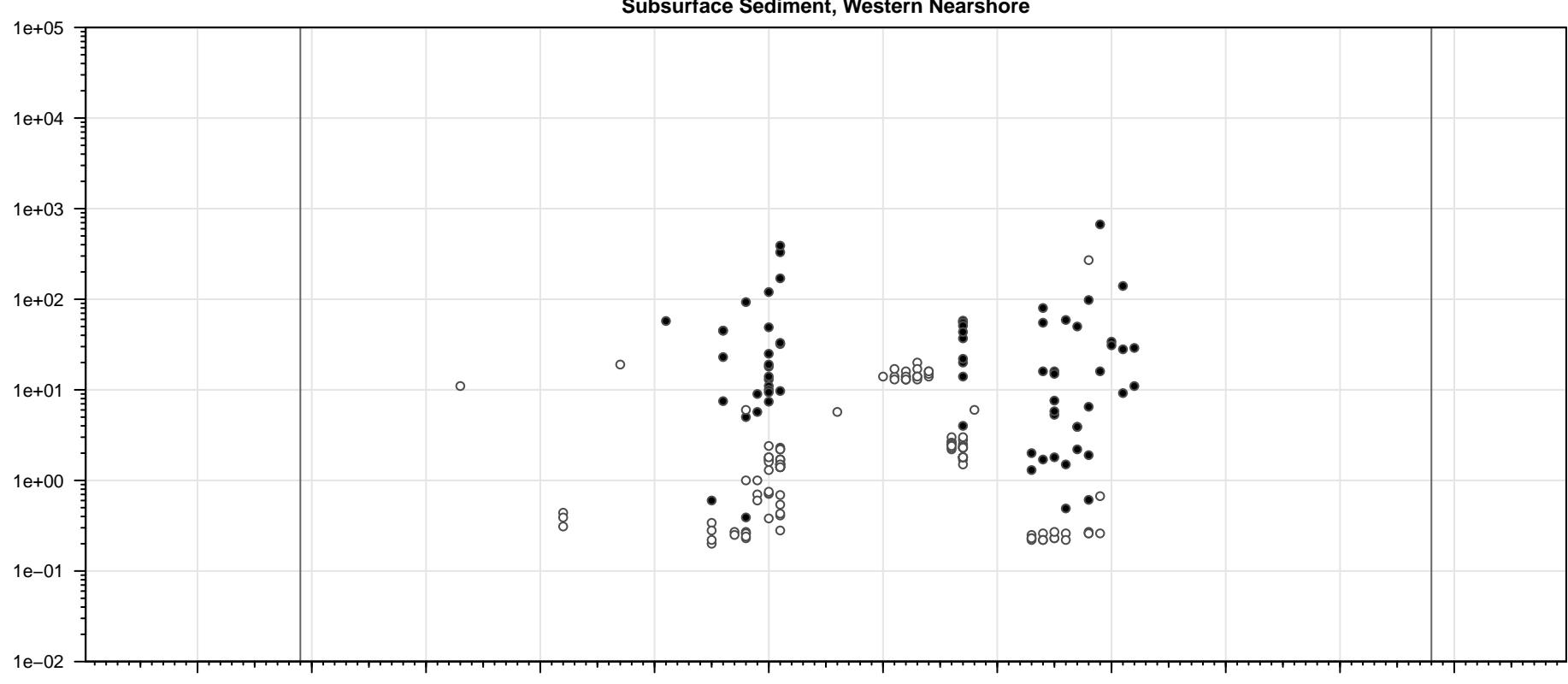
Subsurface Sediment, Eastern Nearshore



Subsurface Sediment, Navigation Channel



Subsurface Sediment, Western Nearshore



River Mile

- River Bed
- ▲ Swan Island
- ▼ Multnomah Channel

- Detected
- Non-Detected

Figure 5.2-41
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Tributyltin Ion
Concentrations in Subsurface Sediment, RM 0.8–12.2

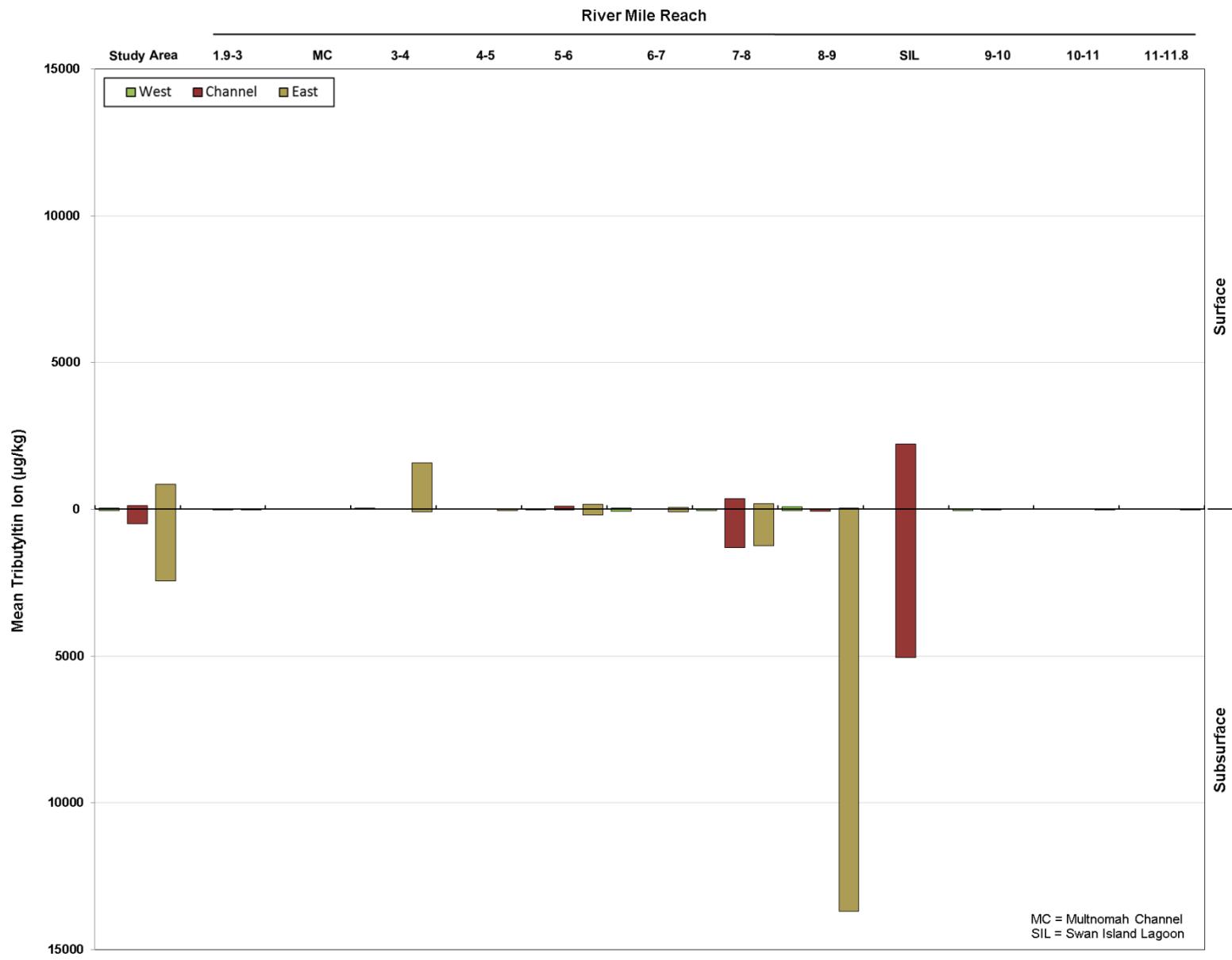
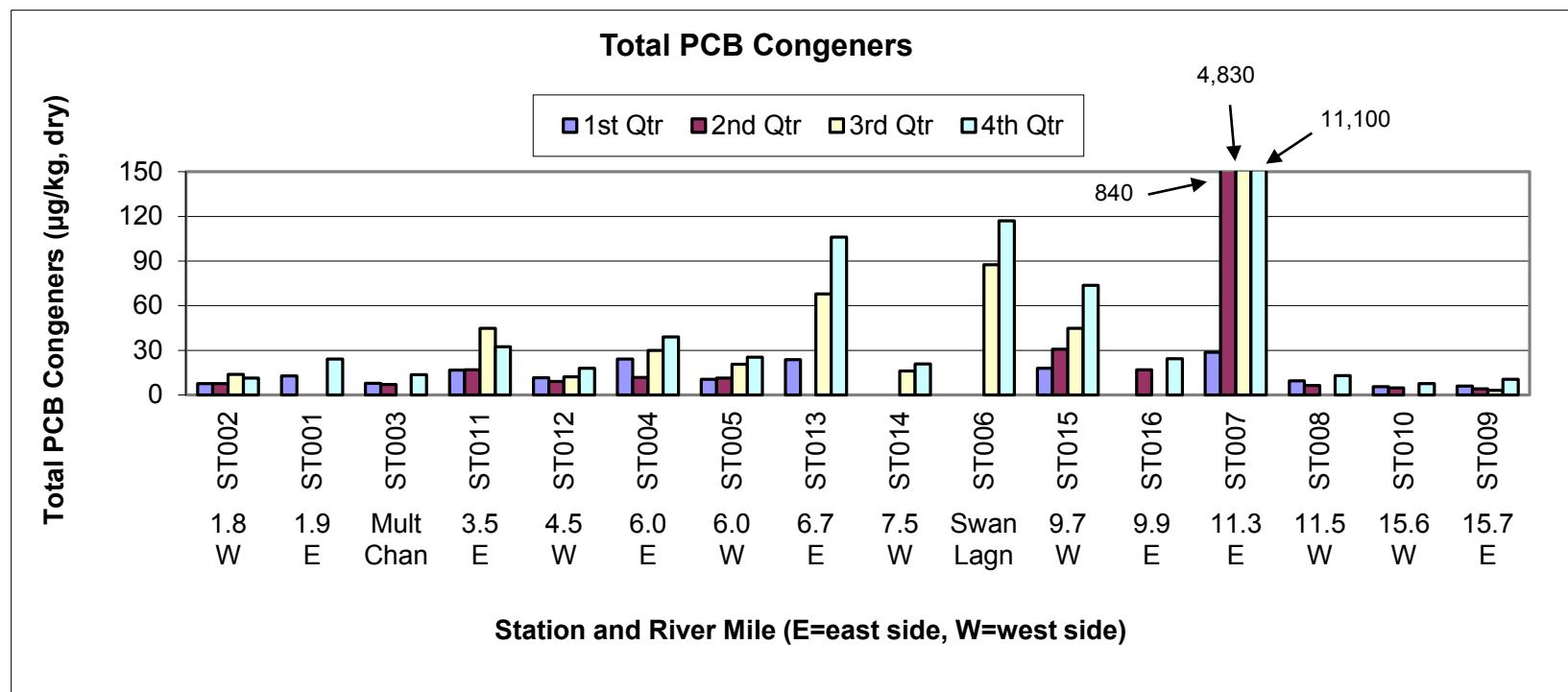
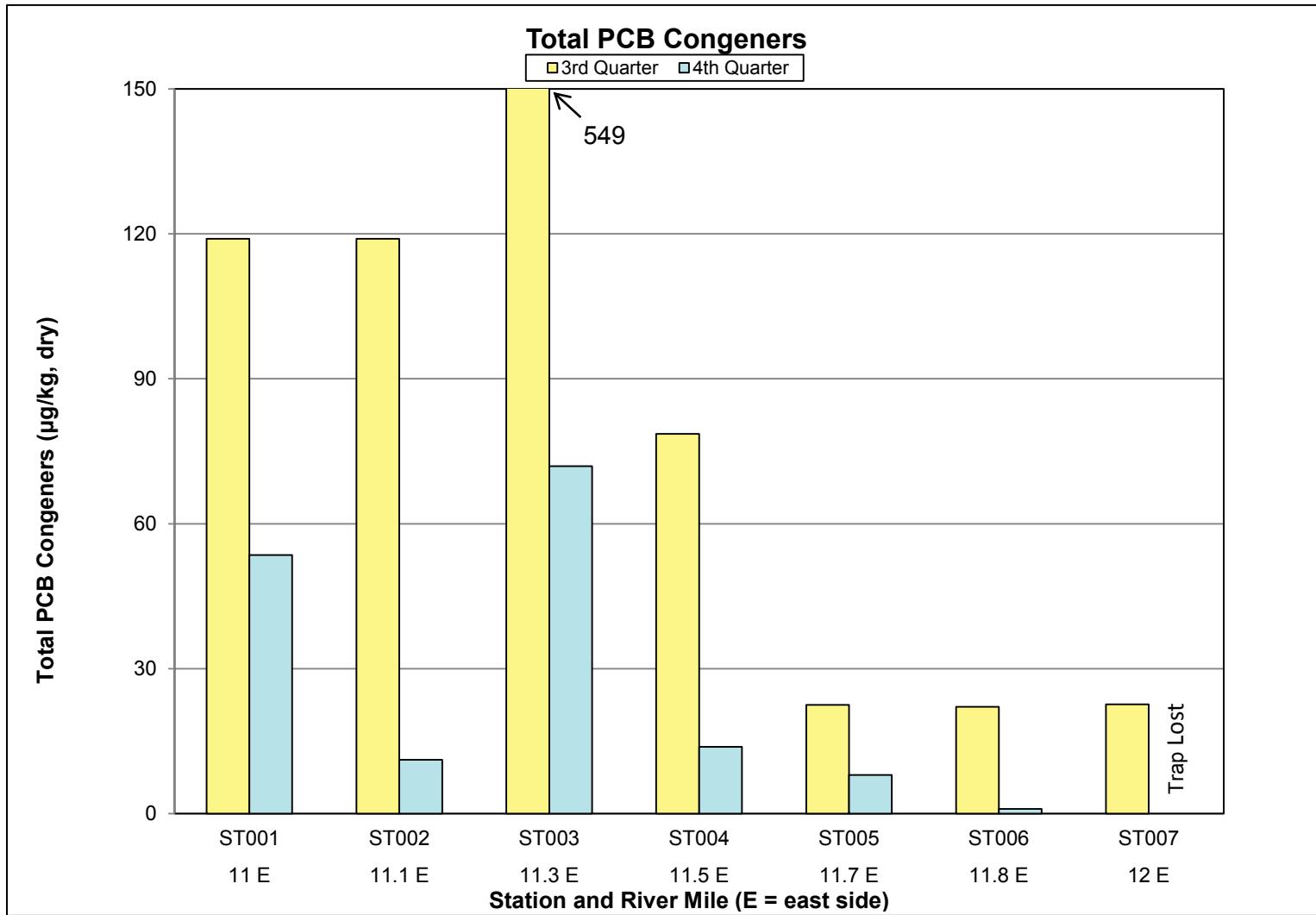


Figure 5.2-42
Portland Harbor RI/FS
Remedial Investigation Report
 Histogram of Mean Tributyltin Ion Concentration
 in Surface and Subsurface Sediment (RM 1.9–11.8)



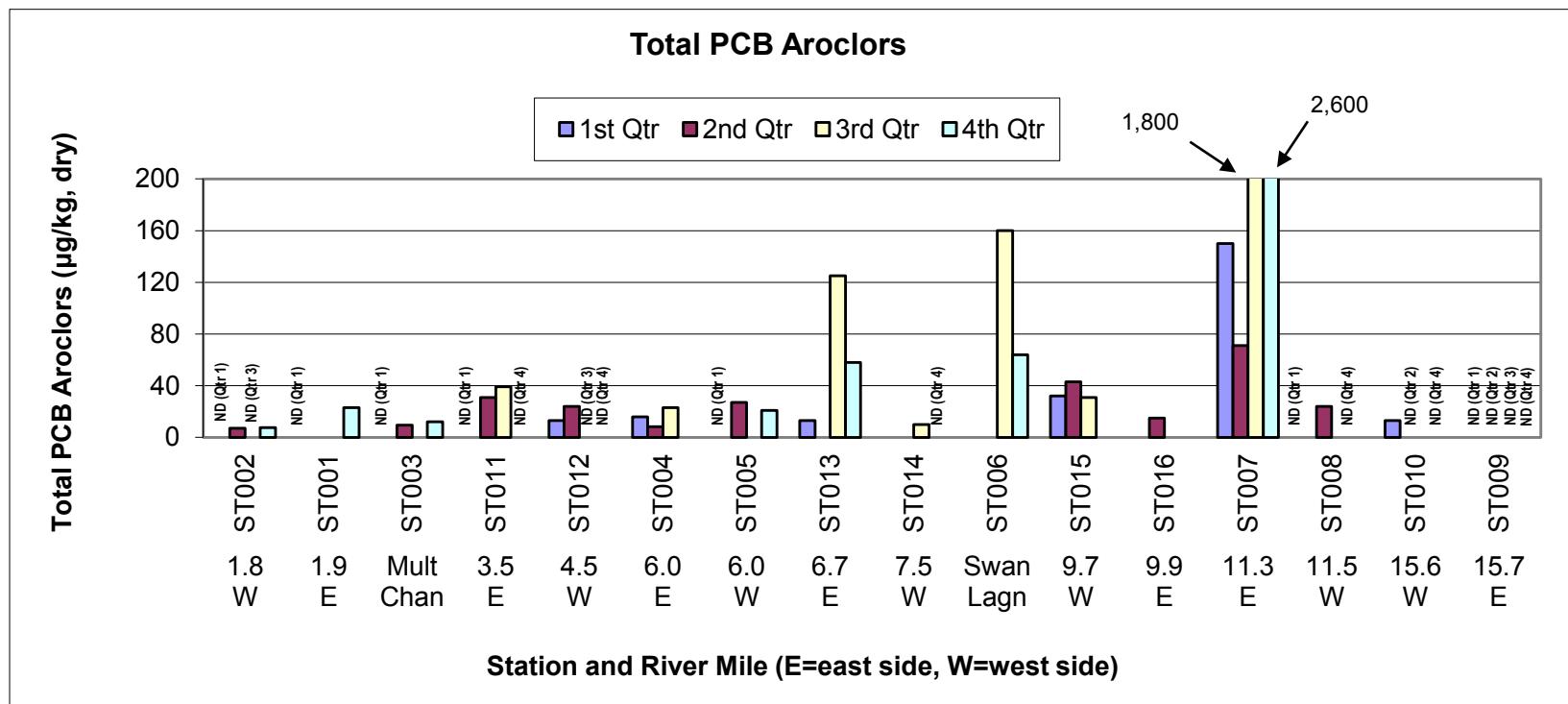
Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

Figure 5.3-1a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total PCB Congener Concentrations
 for In-River Sediment Traps, 2007



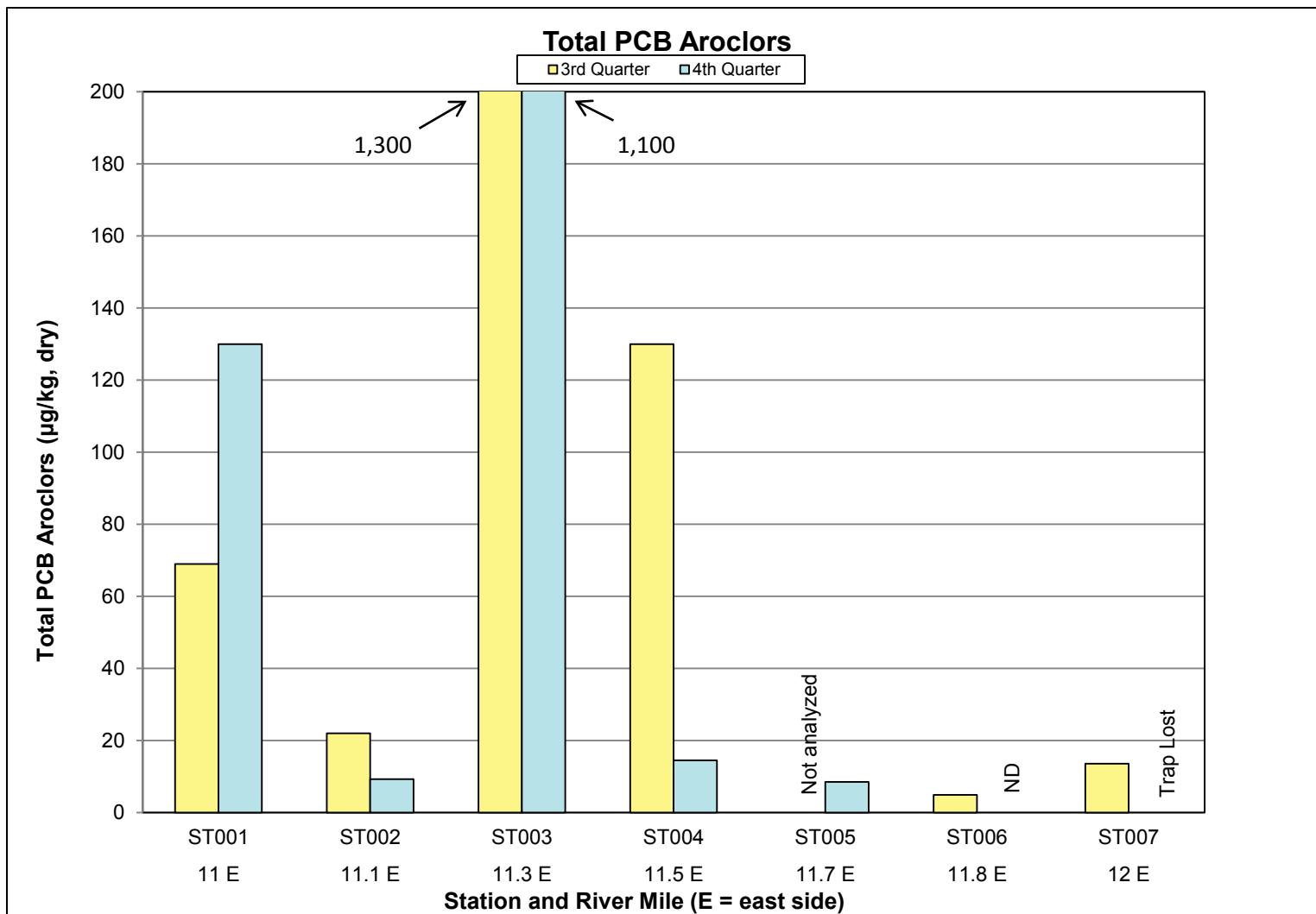
Note: Samples were not collected in the 1st and 2nd quarters.

Figure 5.3-1b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total PCB Congener Concentrations
 for In-River Sediment Traps, 2009



Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.
ND = not detected at quarter shown

Figure 5.3-2a
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total PCB Aroclor Concentrations
for In-River Sediment Traps, 2007



Note: Samples were not collected in the 1st and 2nd quarters.

ND = not detected at quarter shown

Figure 5.3-2b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total PCB Aroclor Concentrations
 for In-River Sediment Traps, 2009

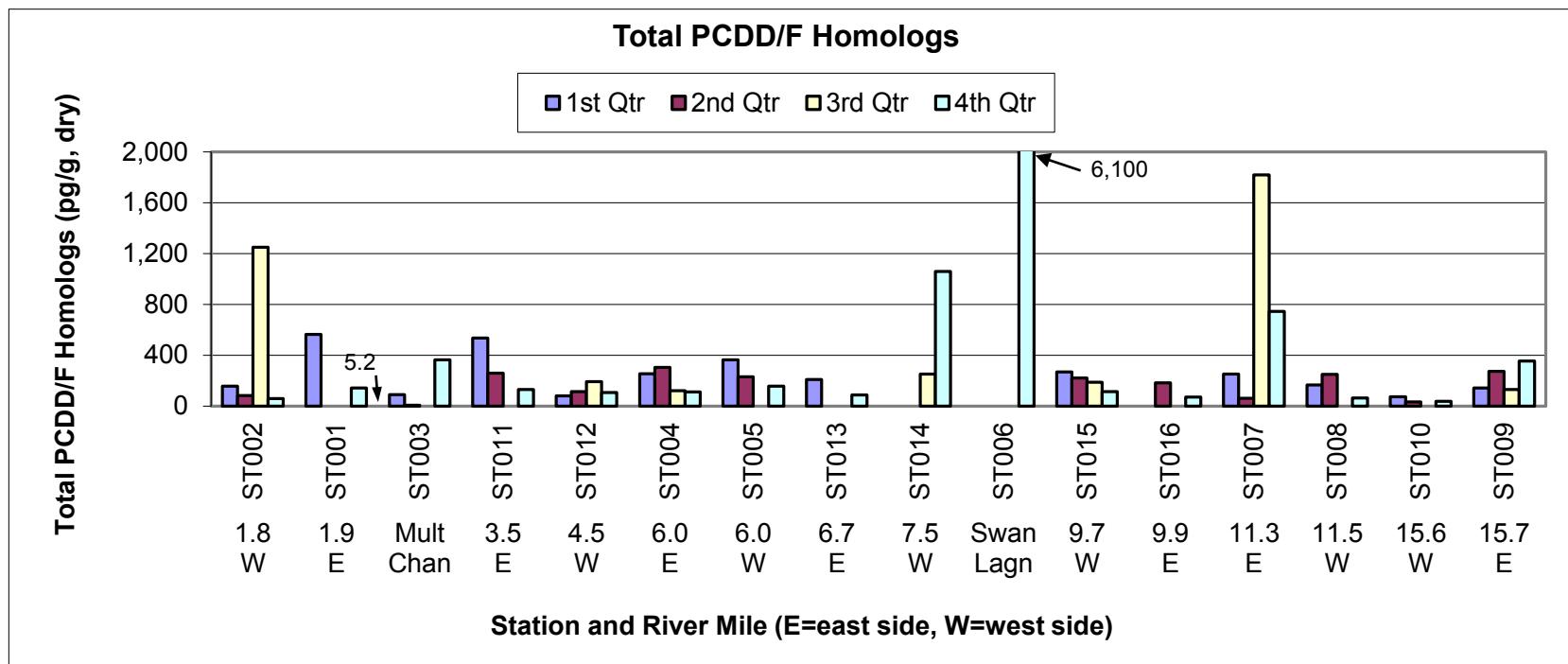
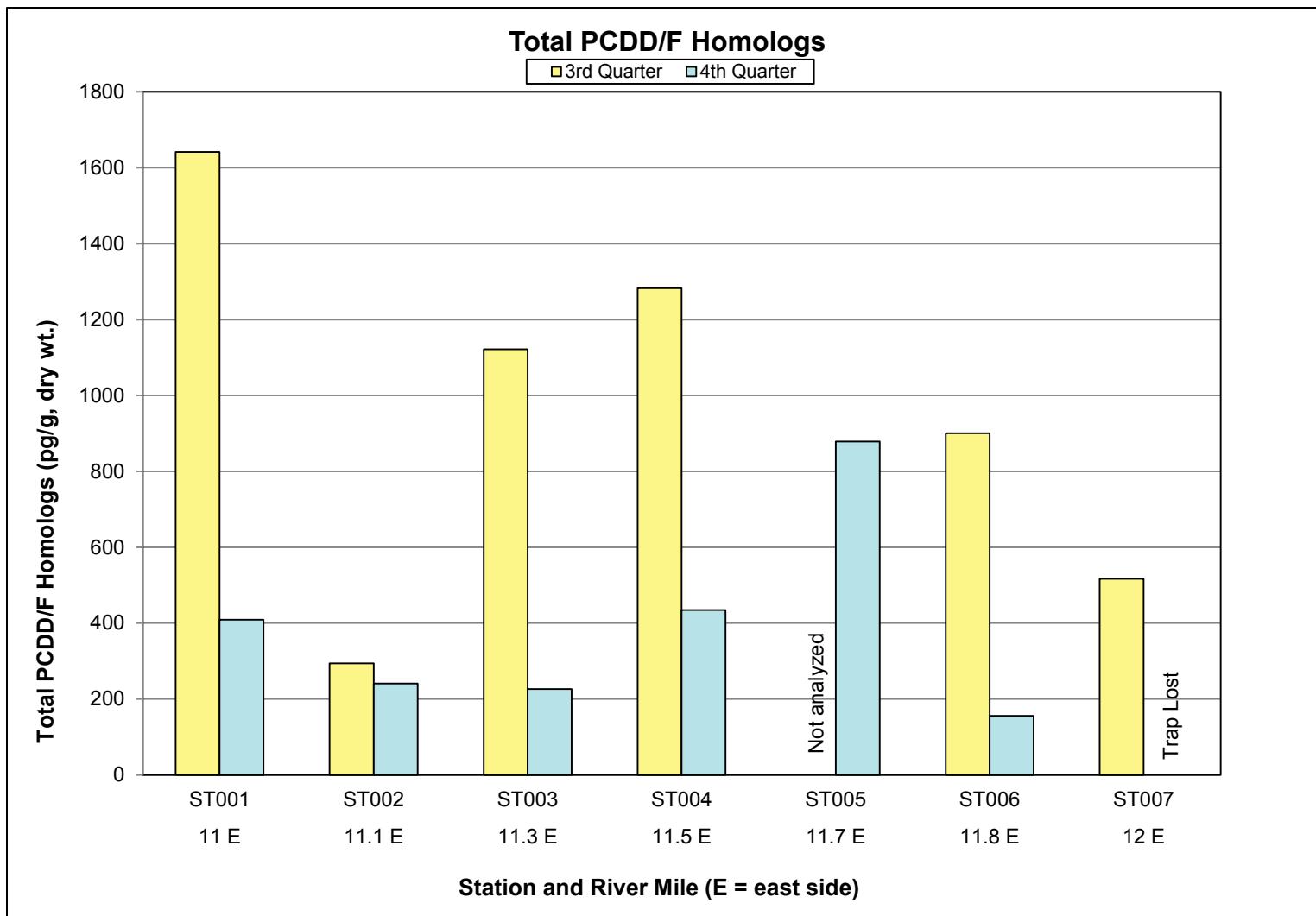
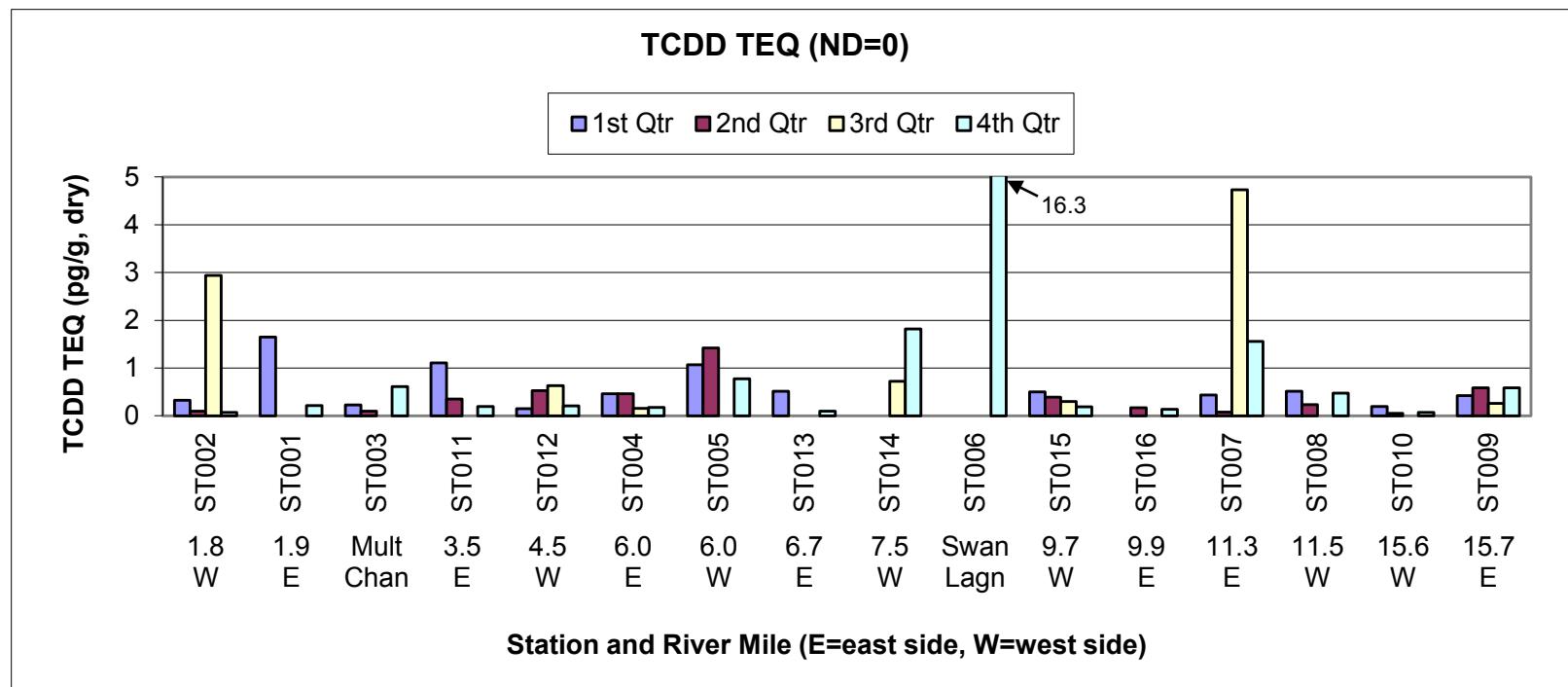


Figure 5.3-3a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total PCDD/F Homolog Concentrations
 for In-River Sediment Traps, 2007



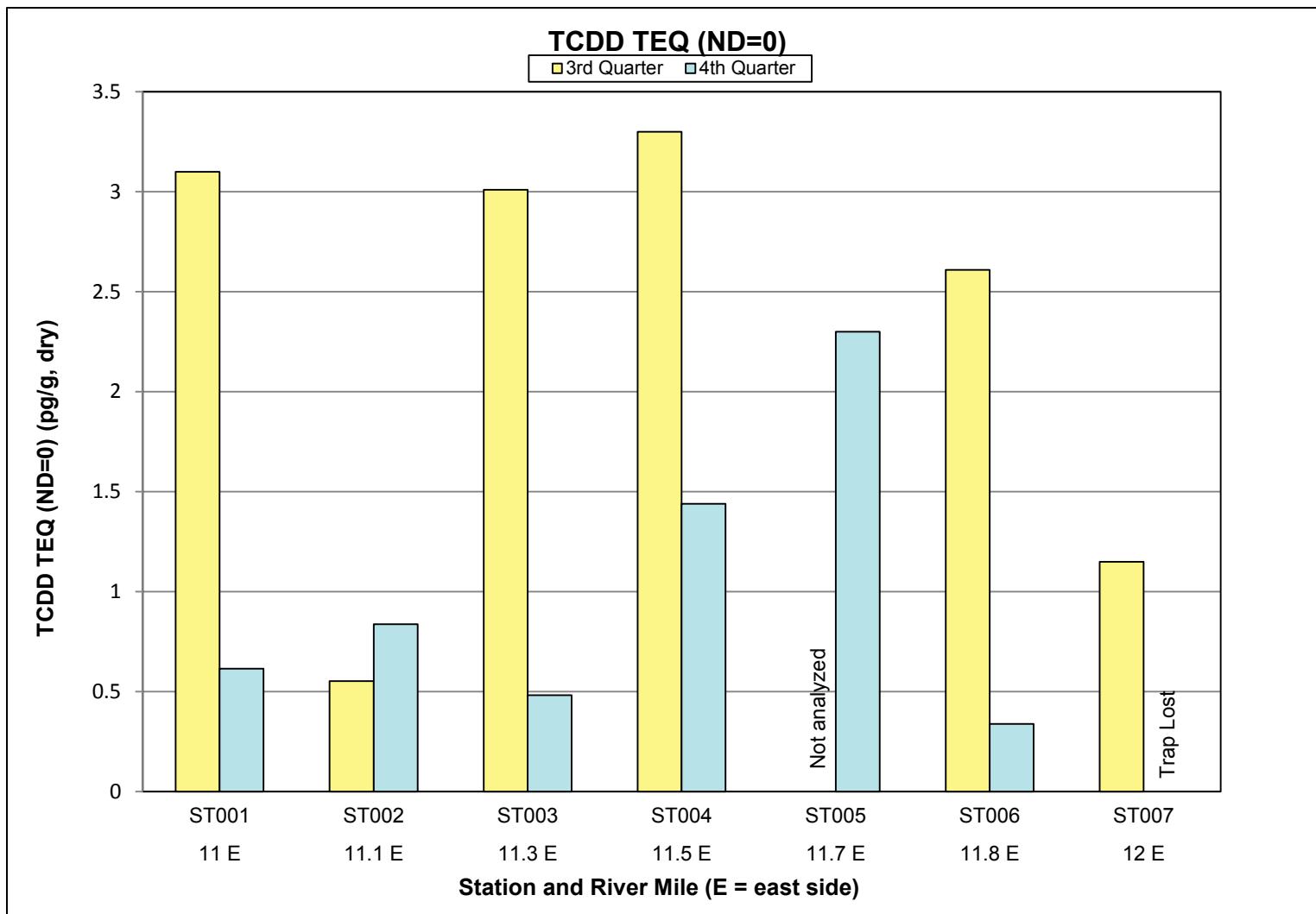
Note: Samples were not collected in the 1st and 2nd quarters.

Figure 5.3-3b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total PCDD/F Homolog Concentrations
 for In-River Sediment Traps, 2009



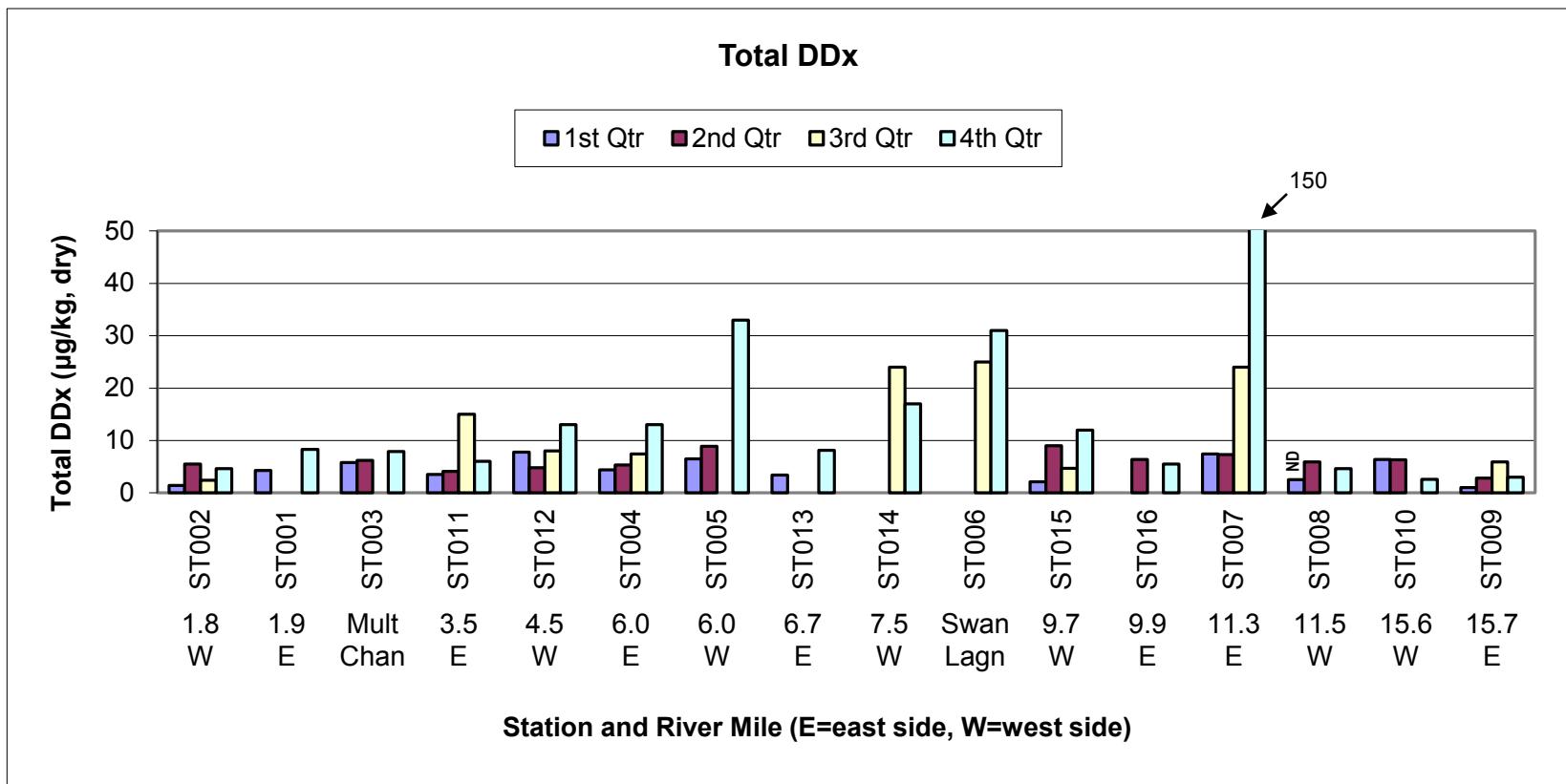
Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

Figure 5.3-4a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total TCDD TEQ (ND=0) Concentrations
 for In-River Sediment Traps, 2007



Note: Samples were not collected in the 1st and 2nd quarters.

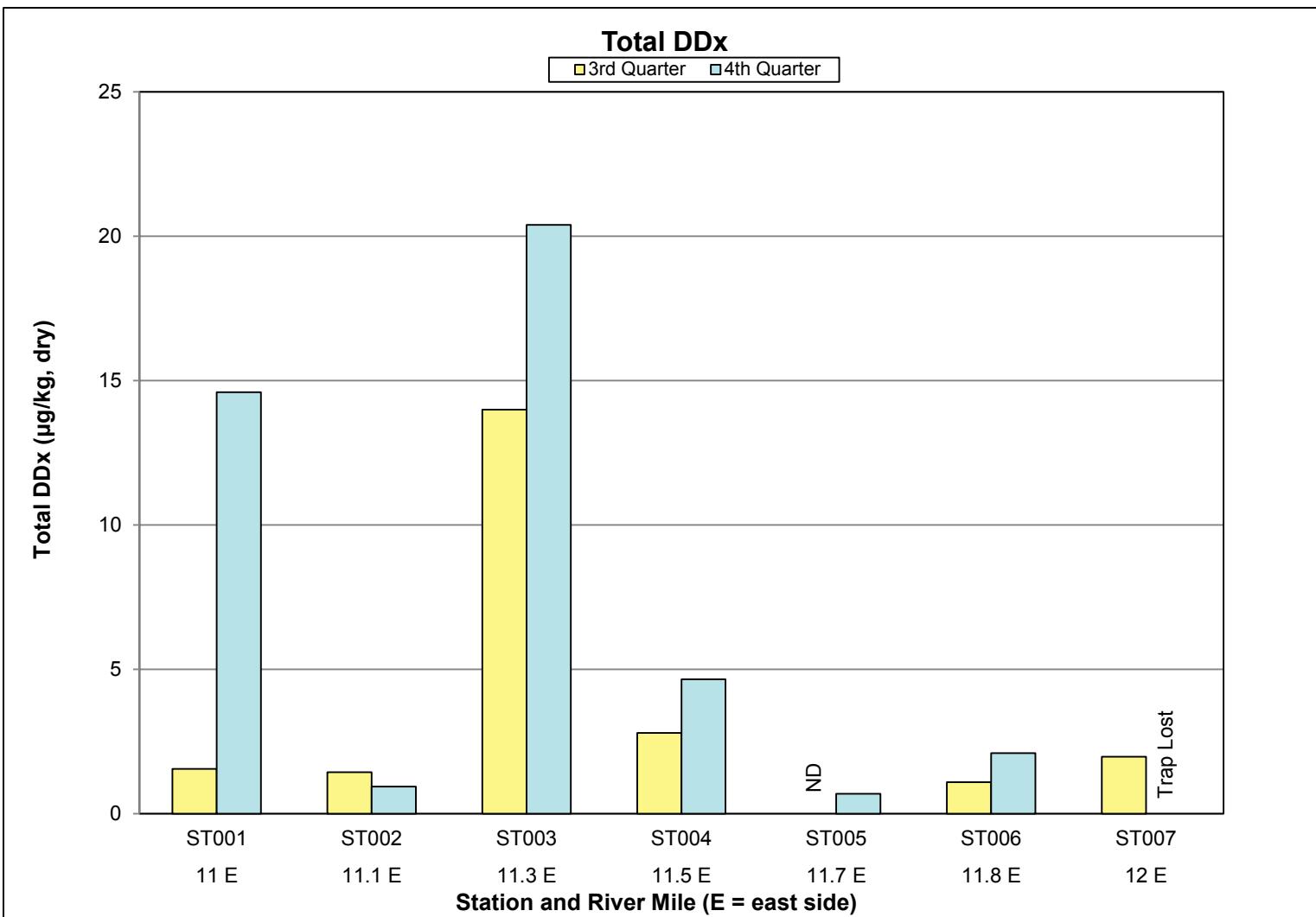
Figure 5.3-4b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total TCDD TEQ (ND=0) Concentrations
 for In-River Sediment Traps, 2009



Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at value shown

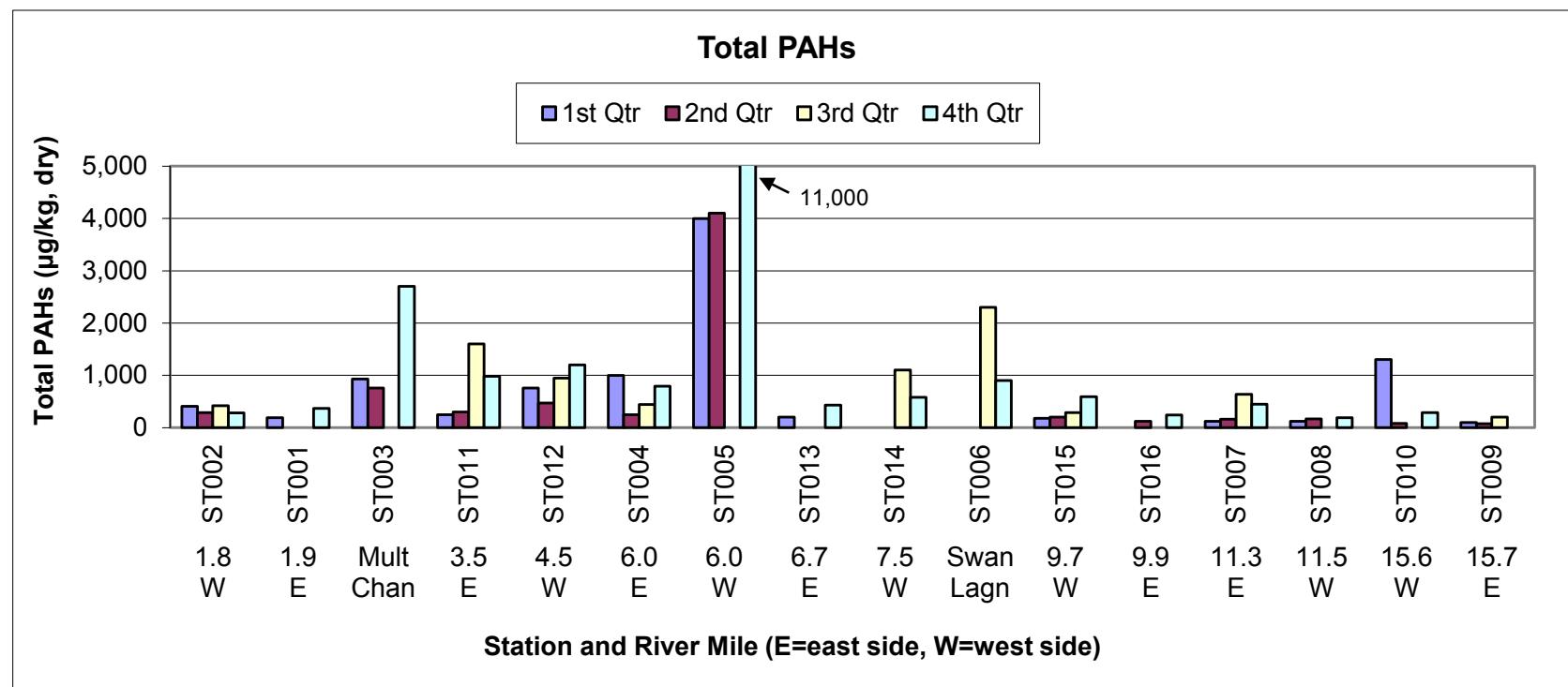
Figure 5.3-5a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total DDx Concentrations
 for In-River Sediment Traps, 2007



Note: Samples were not collected in the 1st and 2nd quarters.

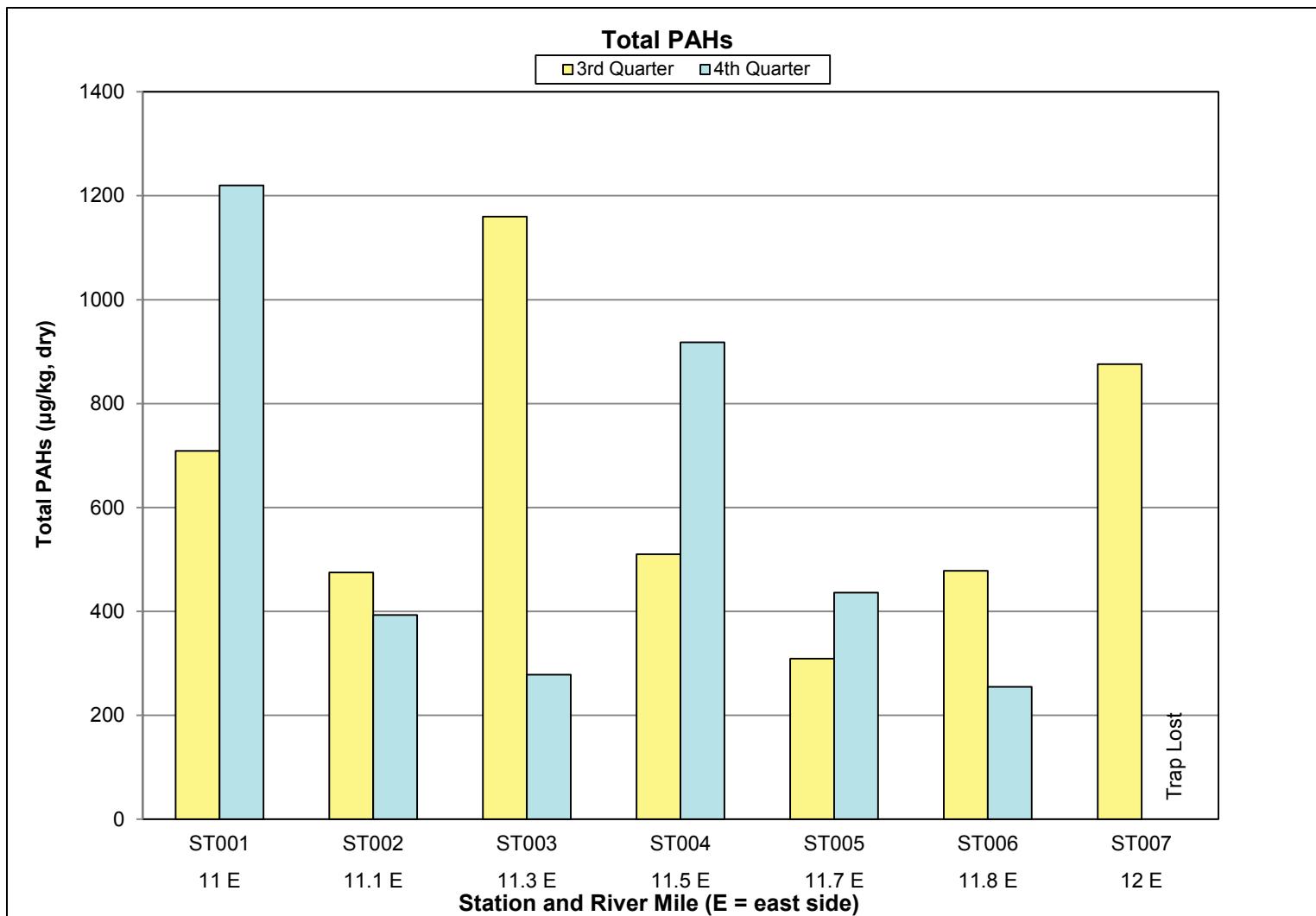
ND = not detected at quarter shown

Figure 5.3-5b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total DDX Concentrations
 for In-River Sediment Traps, 2009



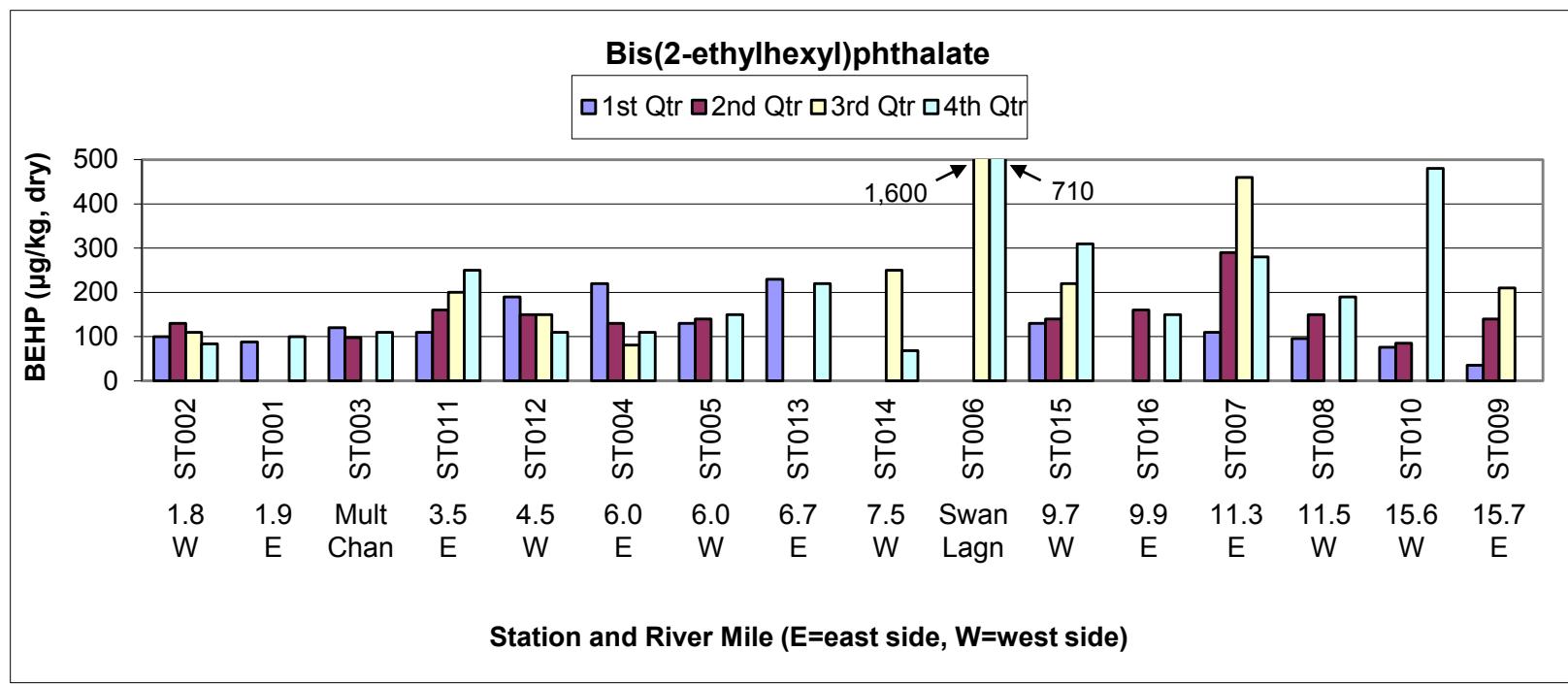
Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

Figure 5.3-6a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total PAH Concentrations
 for In-River Sediment Traps, 2007



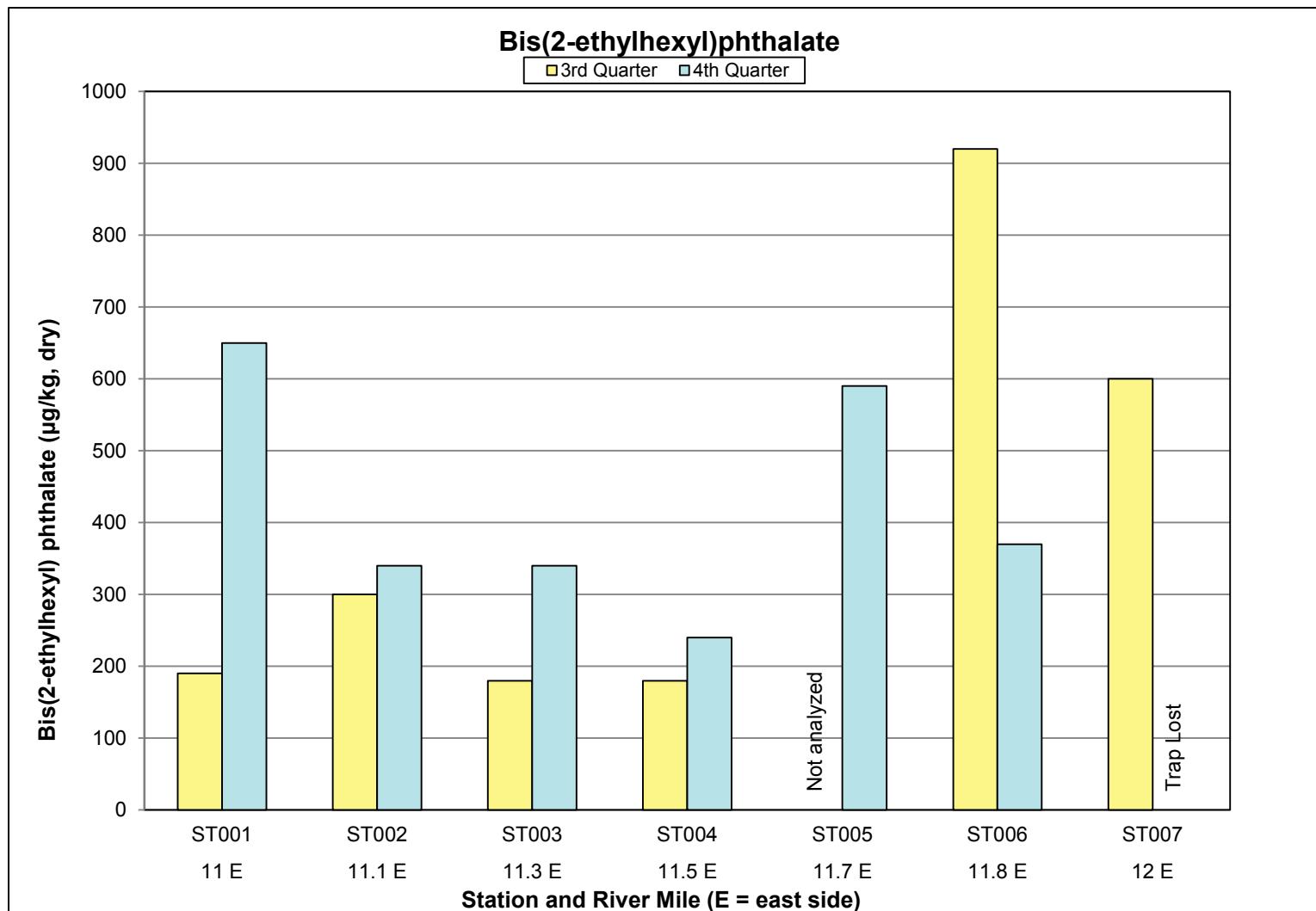
Note: Samples were not collected in the 1st and 2nd quarters.

Figure 5.3-6b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total PAHs Concentrations
 for In-River Sediment Traps, 2009



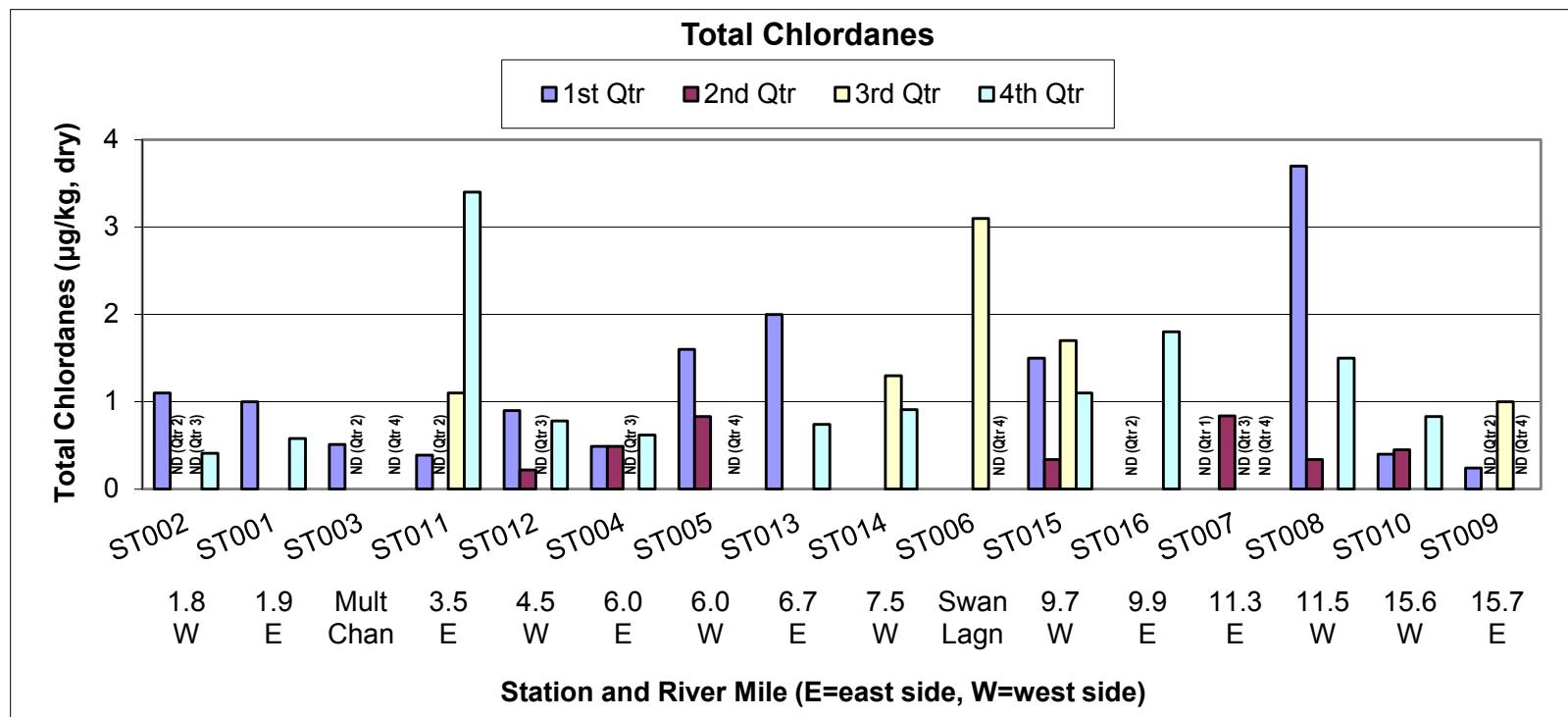
Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

Figure 5.3-7a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Bis(2-ethylhexyl)phthalate Concentrations
 for In-River Sediment Traps, 2007



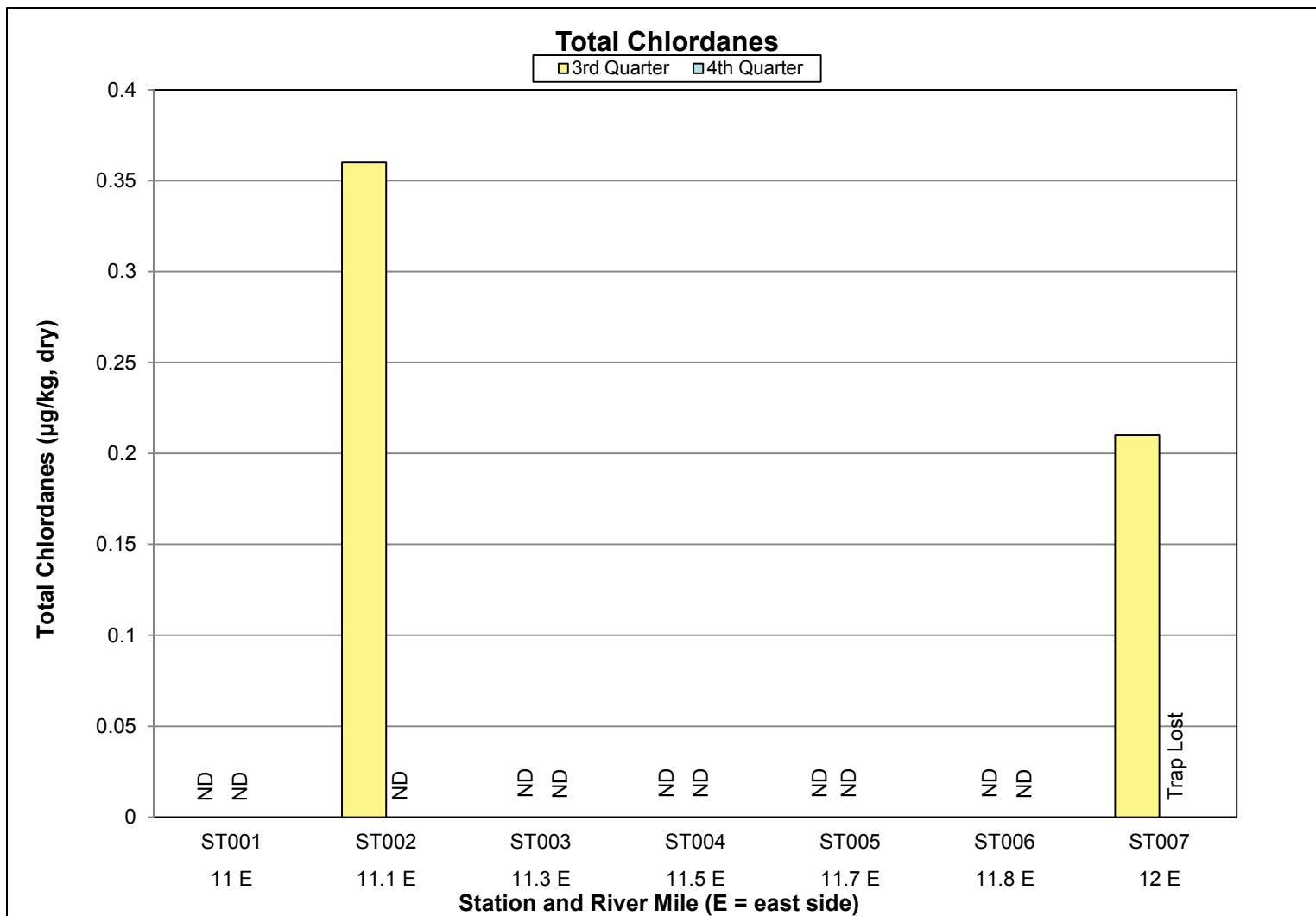
Note: Samples were not collected in the 1st and 2nd quarters.

Figure 5.3-7b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Bis(2-ethylhexyl)phthalate Concentrations
 for In-River Sediment Traps, 2009



Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.
ND = not detected at quarter shown

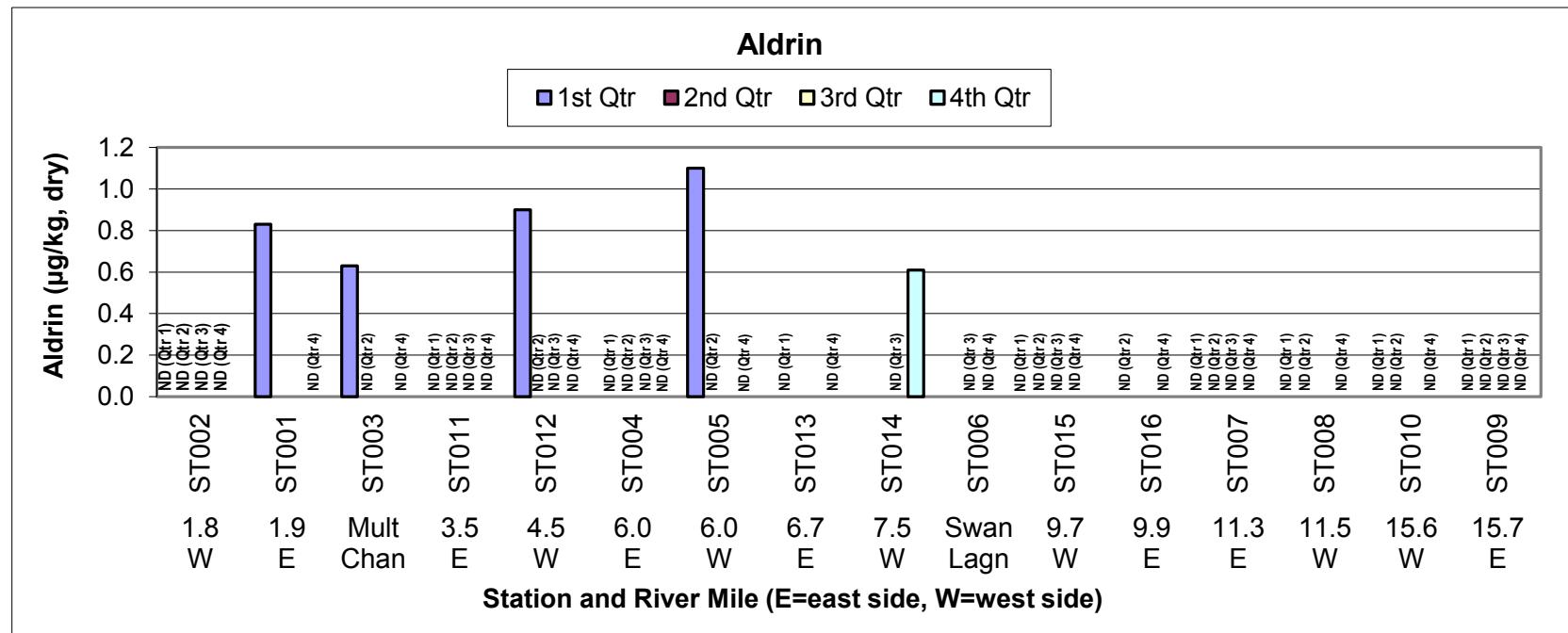
Figure 5.3-8a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total Chlordanes Concentrations
 for In-River Sediment Traps, 2007



Note: Samples were not collected in the 1st and 2nd quarters.

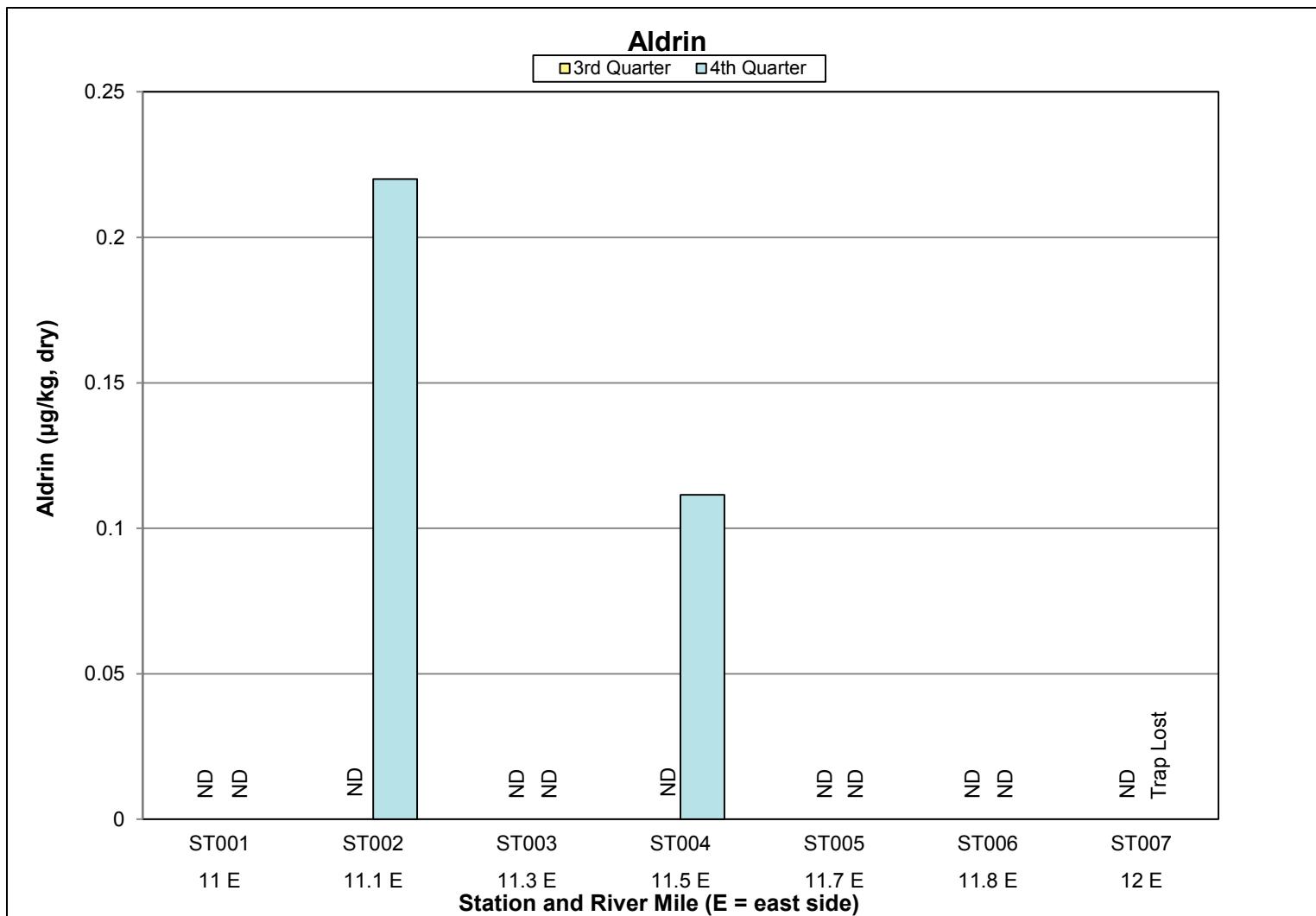
ND = not detected at quarter shown

Figure 5.3-8b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Total Chlordanes Concentrations
 for In-River Sediment Traps, 2009



Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.
ND = not detected at quarter shown

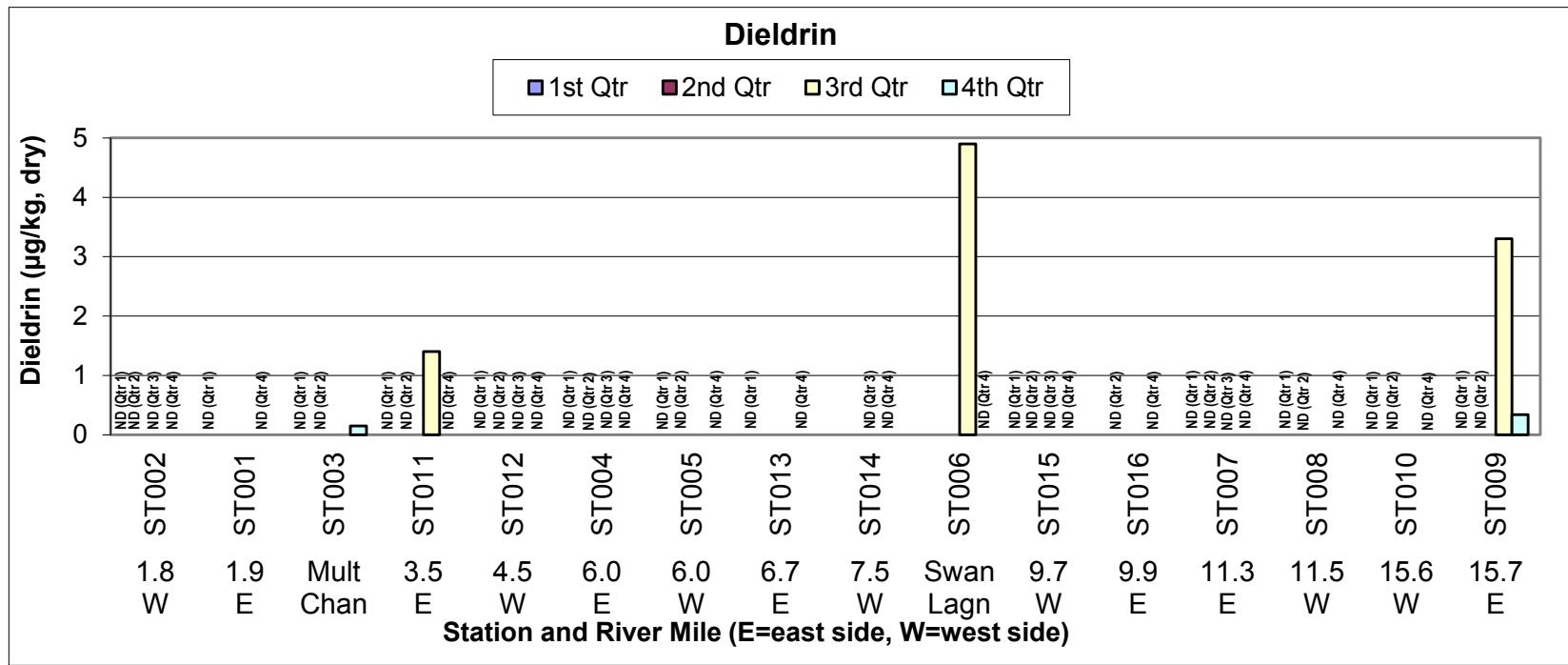
Figure 5.3-9a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Aldrin Concentrations
 for In-River Sediment Traps, 2007



Note: Samples were not collected in the 1st and 2nd quarters.

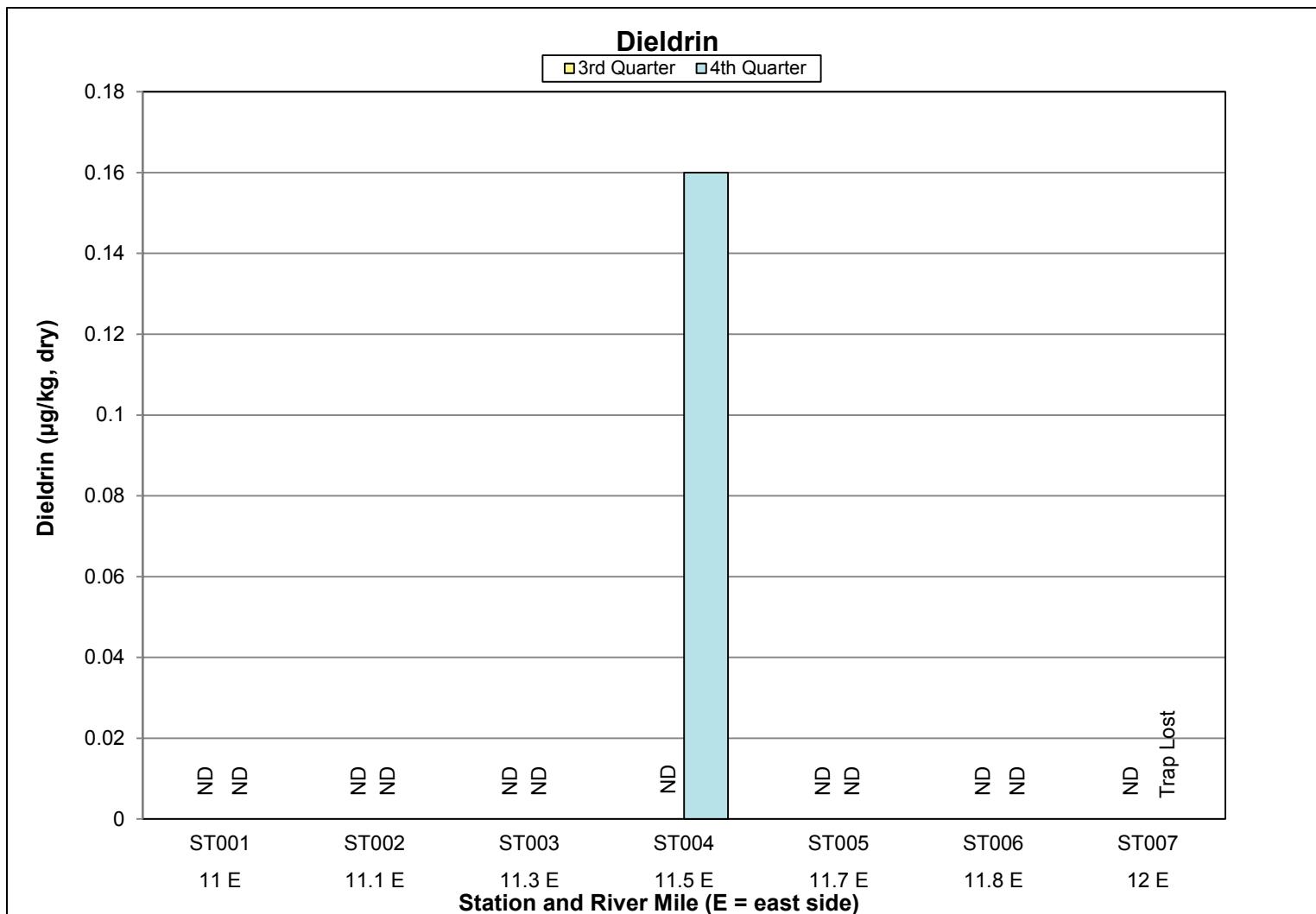
ND = not detected at quarter shown

Figure 5.3-9b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Aldrin Concentrations
 for In-River Sediment Traps, 2009



Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.
ND = not detected at quarter shown

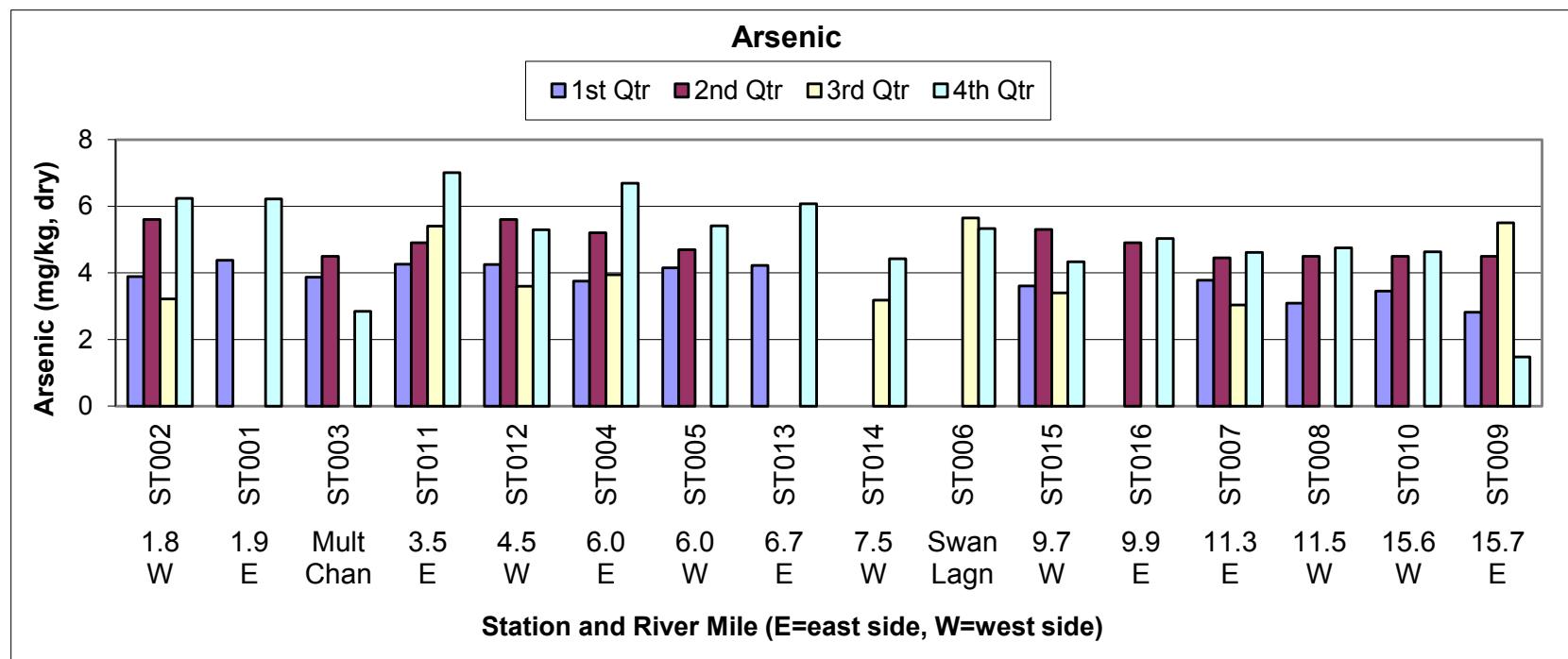
Figure 5.3-10a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Dieldrin Concentrations
 for In-River Sediment Traps, 2007



Note: Samples were not collected in the 1st and 2nd quarters.

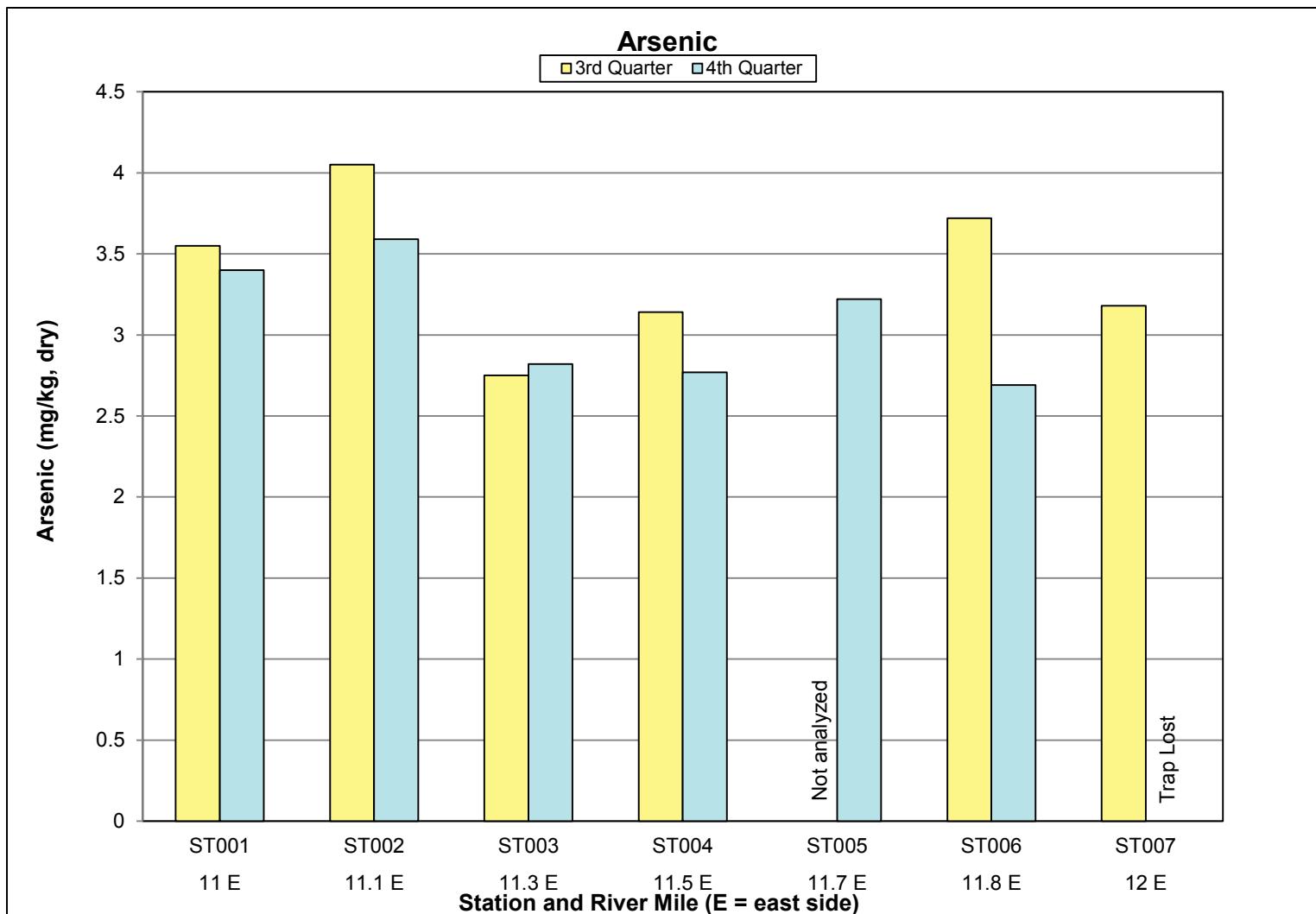
ND = not detected at quarter shown

Figure 5.3-10b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Dieldrin Concentrations
 for In-River Sediment Traps, 2009



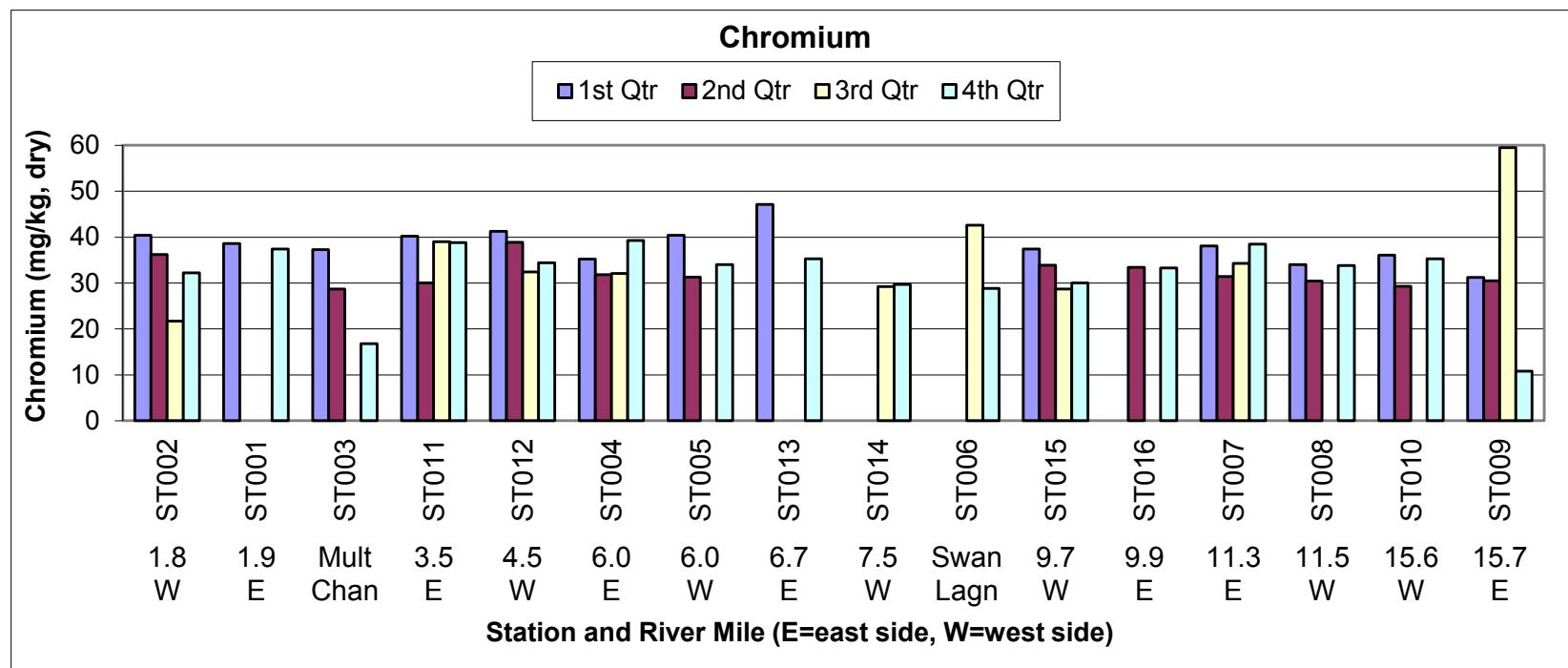
Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

Figure 5.3-11a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Arsenic Concentrations
 for In-River Sediment Traps, 2007



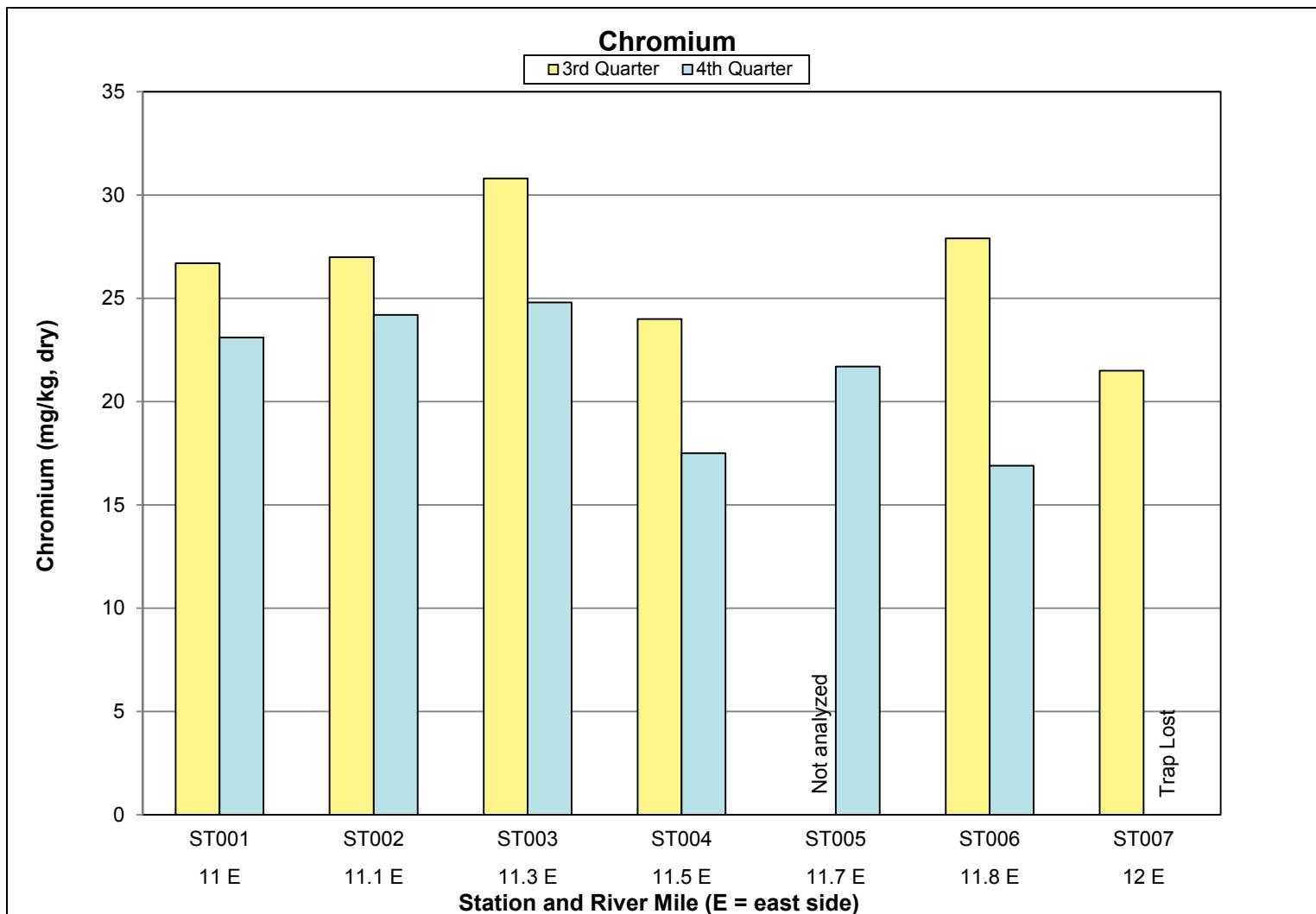
Note: Samples were not collected in the 1st and 2nd quarters.

Figure 5.3-11b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Arsenic Concentrations
 for In-River Sediment Traps, 2009



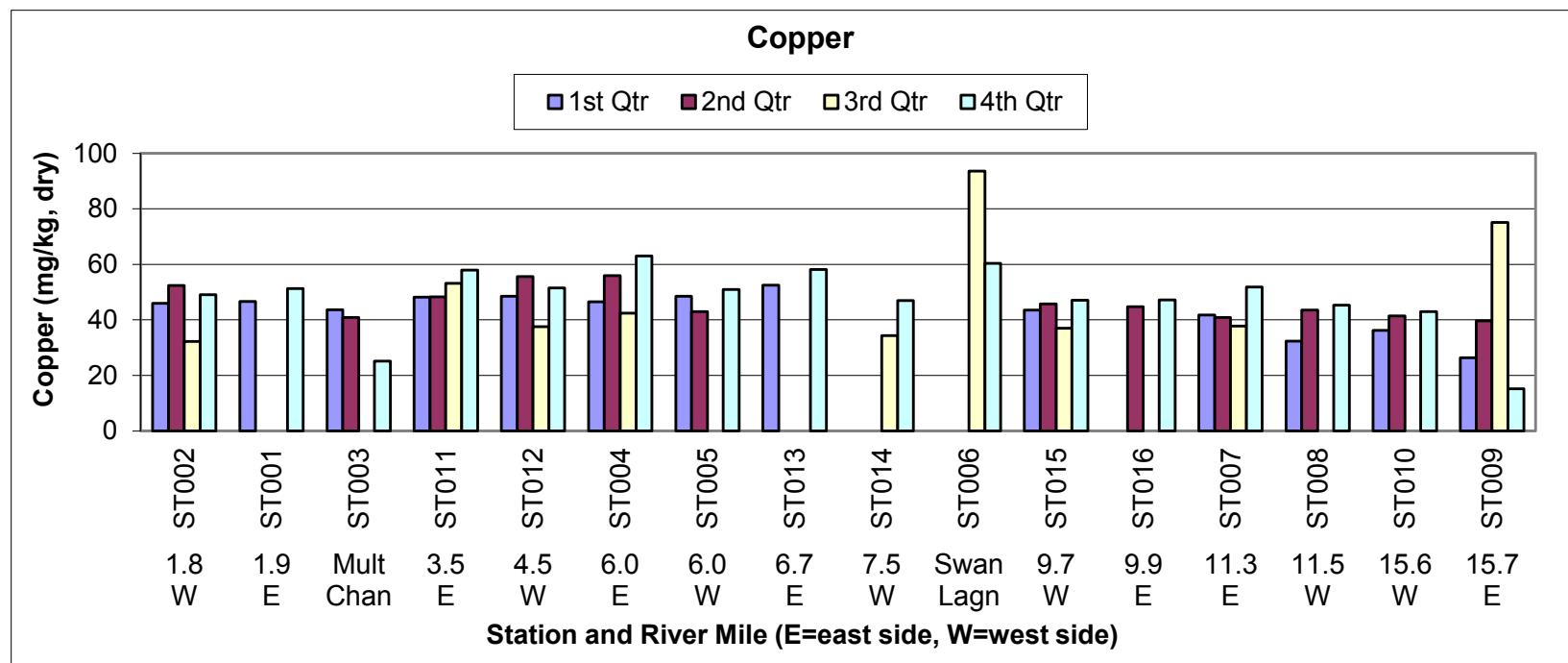
Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

Figure 5.3-12a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Chromium Concentrations
 for In-River Sediment Traps, 2007



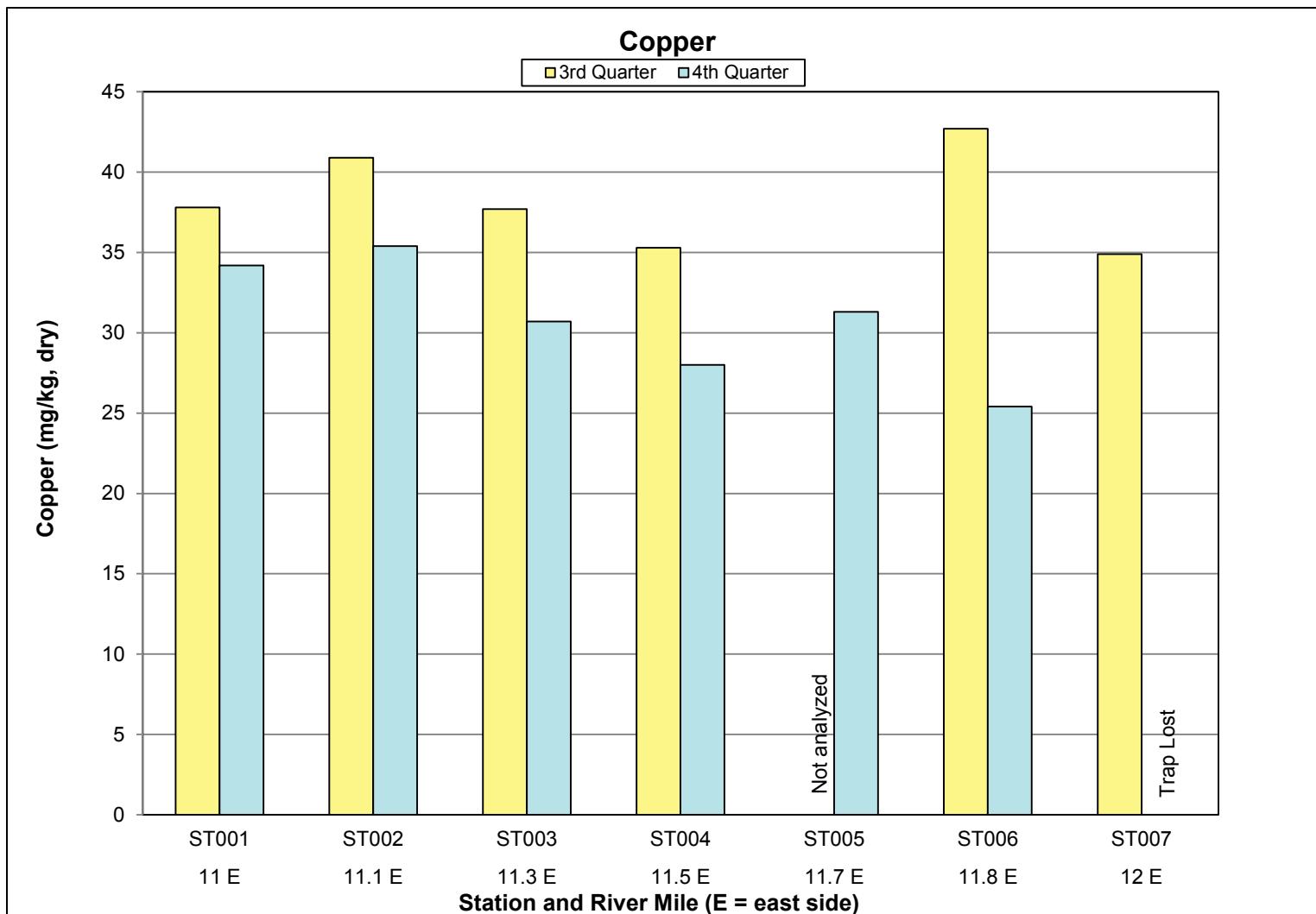
Note: Samples were not collected in the 1st and 2nd quarters.

Figure 5.3-12b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Chromium Concentrations
 for In-River Sediment Traps, 2009



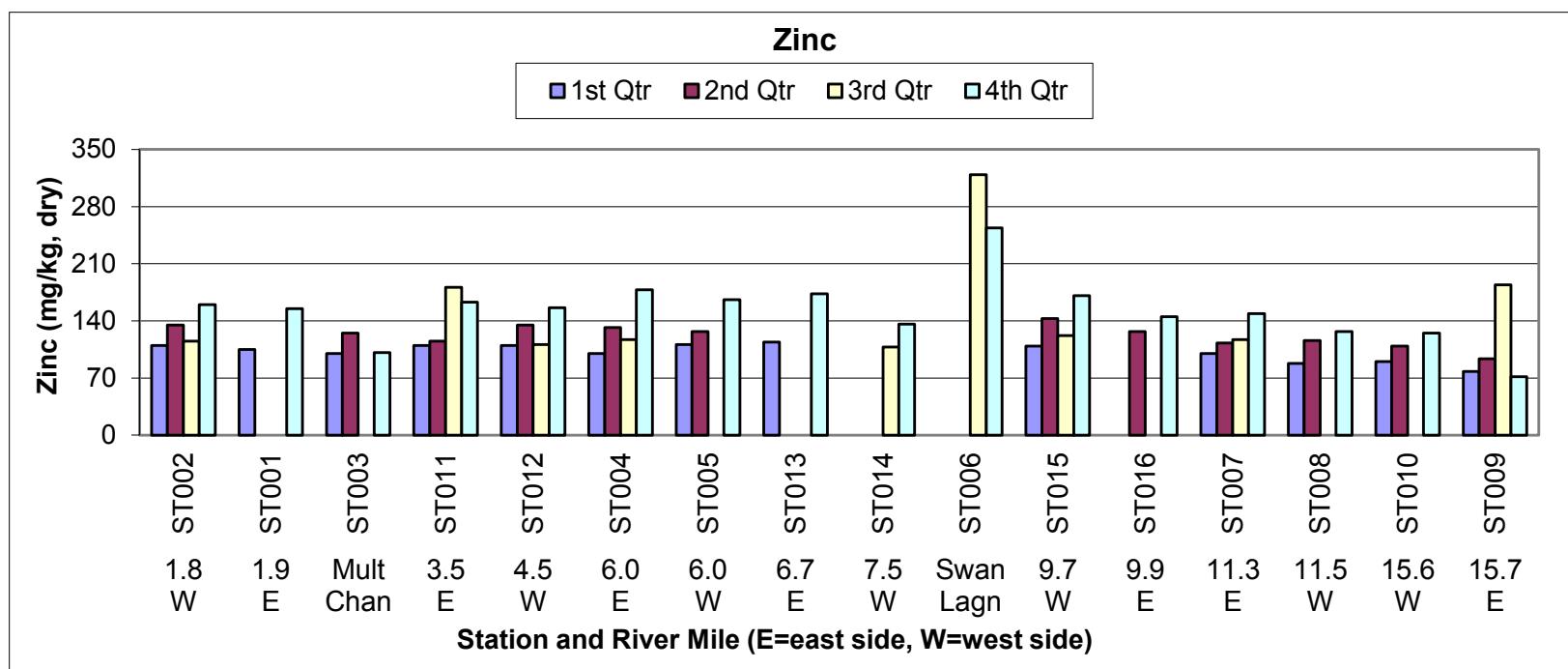
Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

Figure 5.3-13a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Copper Concentrations
 for In-River Sediment Traps, 2007



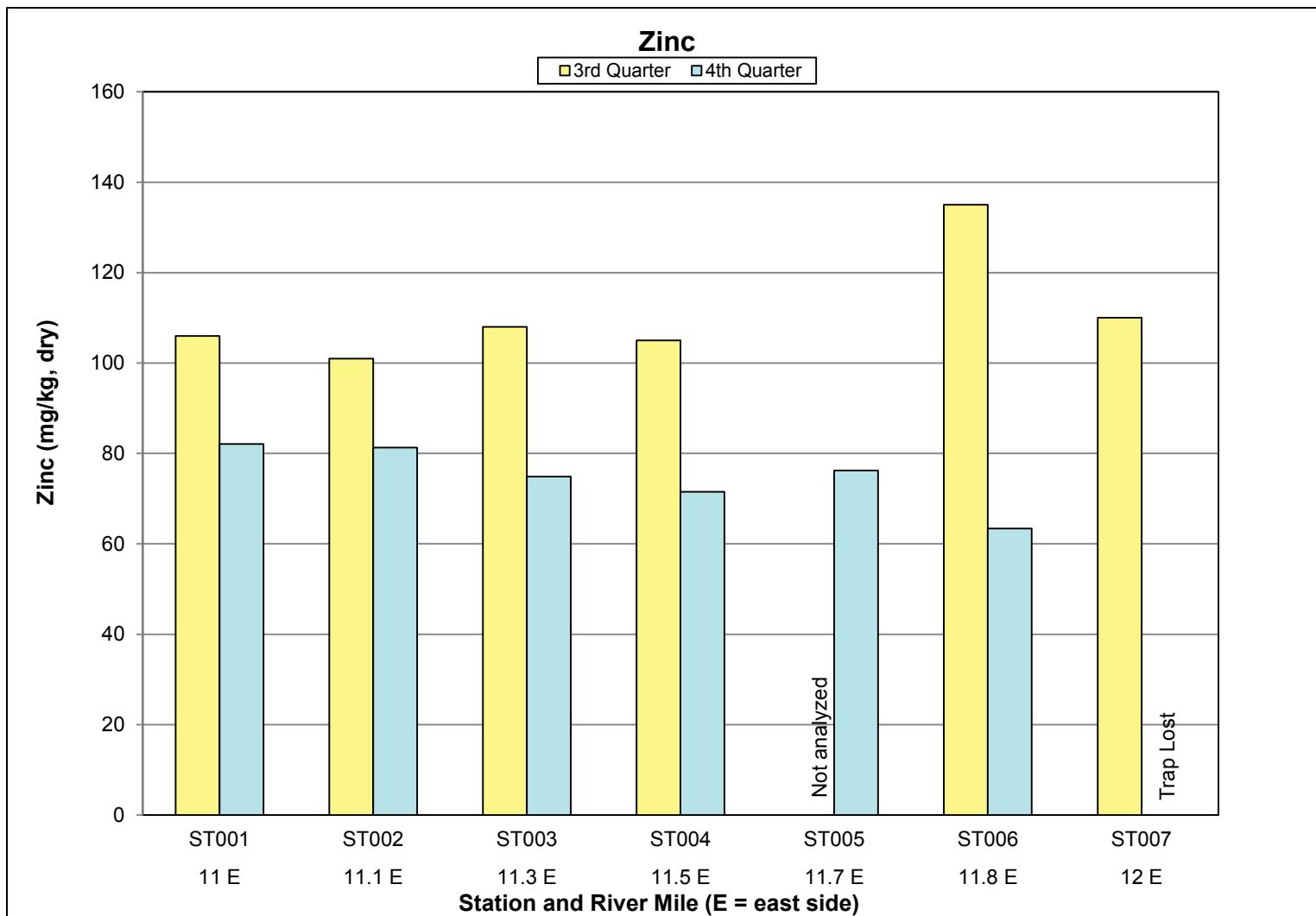
Note: Samples were not collected in the 1st and 2nd quarters.

Figure 5.3-13b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Copper Concentrations
 for In-River Sediment Traps, 2009



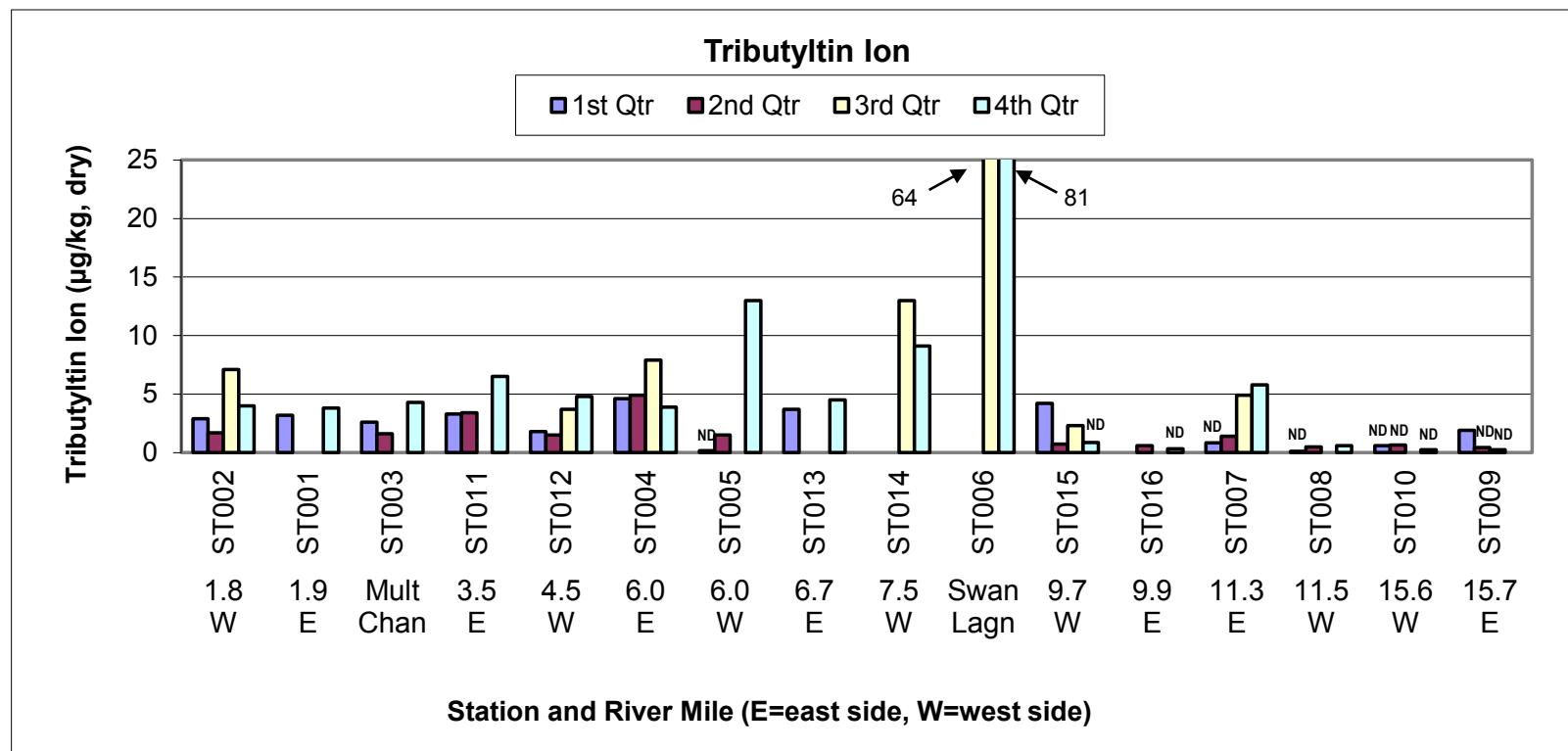
Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

Figure 5.3-14a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Zinc Concentrations
 for In-River Sediment Traps, 2007



Note: Samples were not collected in the 1st and 2nd quarters.

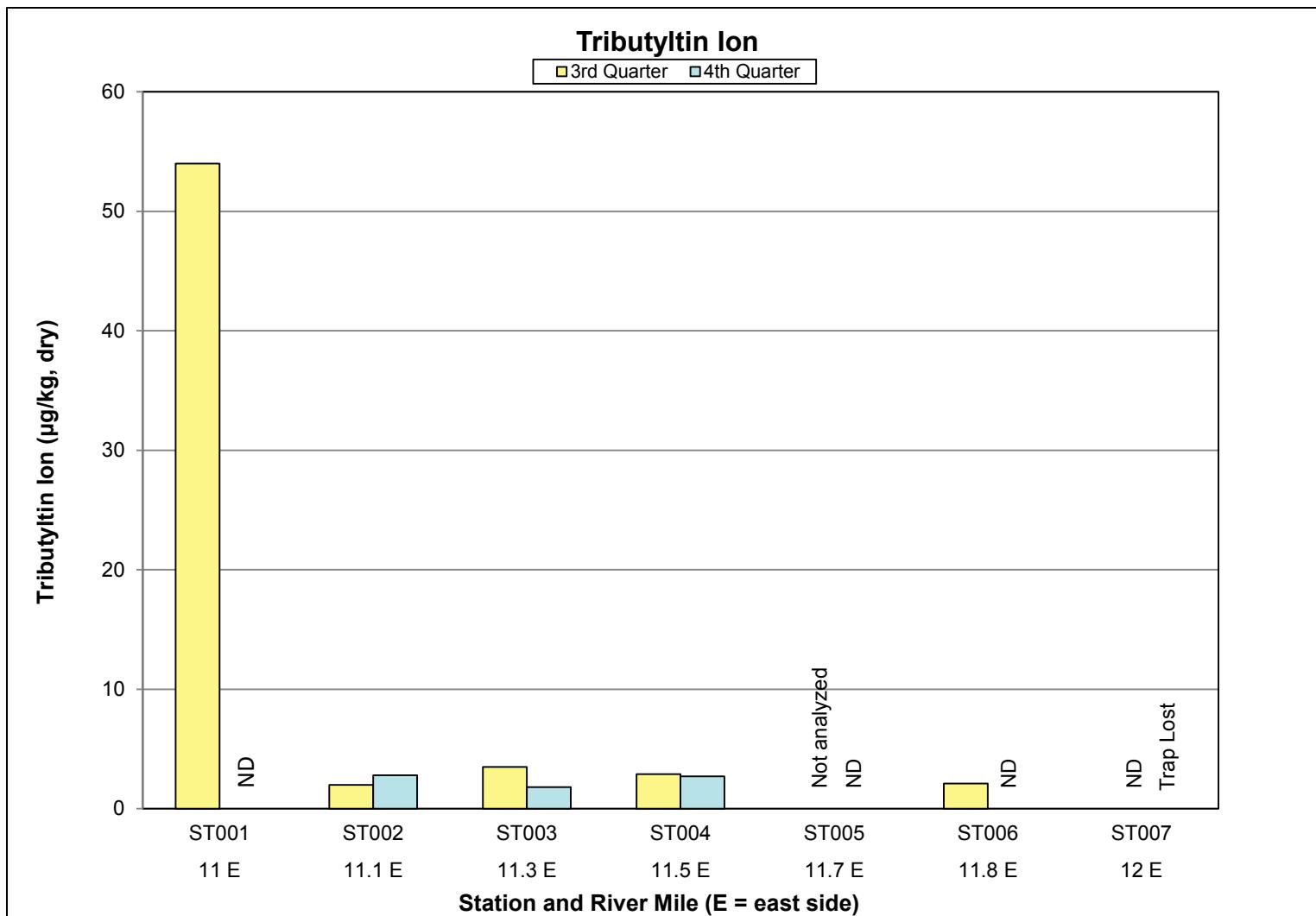
Figure 5.3-14b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Zinc Concentrations
 for In-River Sediment Traps, 2009



Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at value shown

Figure 5.3-15a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Tributyltin Ion Concentrations
 for In-River Sediment Traps, 2007



Note: Samples were not collected in the 1st and 2nd quarters.

ND = not detected at quarter shown

Figure 5.3-15b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Tributyltin Ion Concentrations
 for In-River Sediment Traps, 2009

Accumulation Rate of Trapped Sediments as a Function of Fines

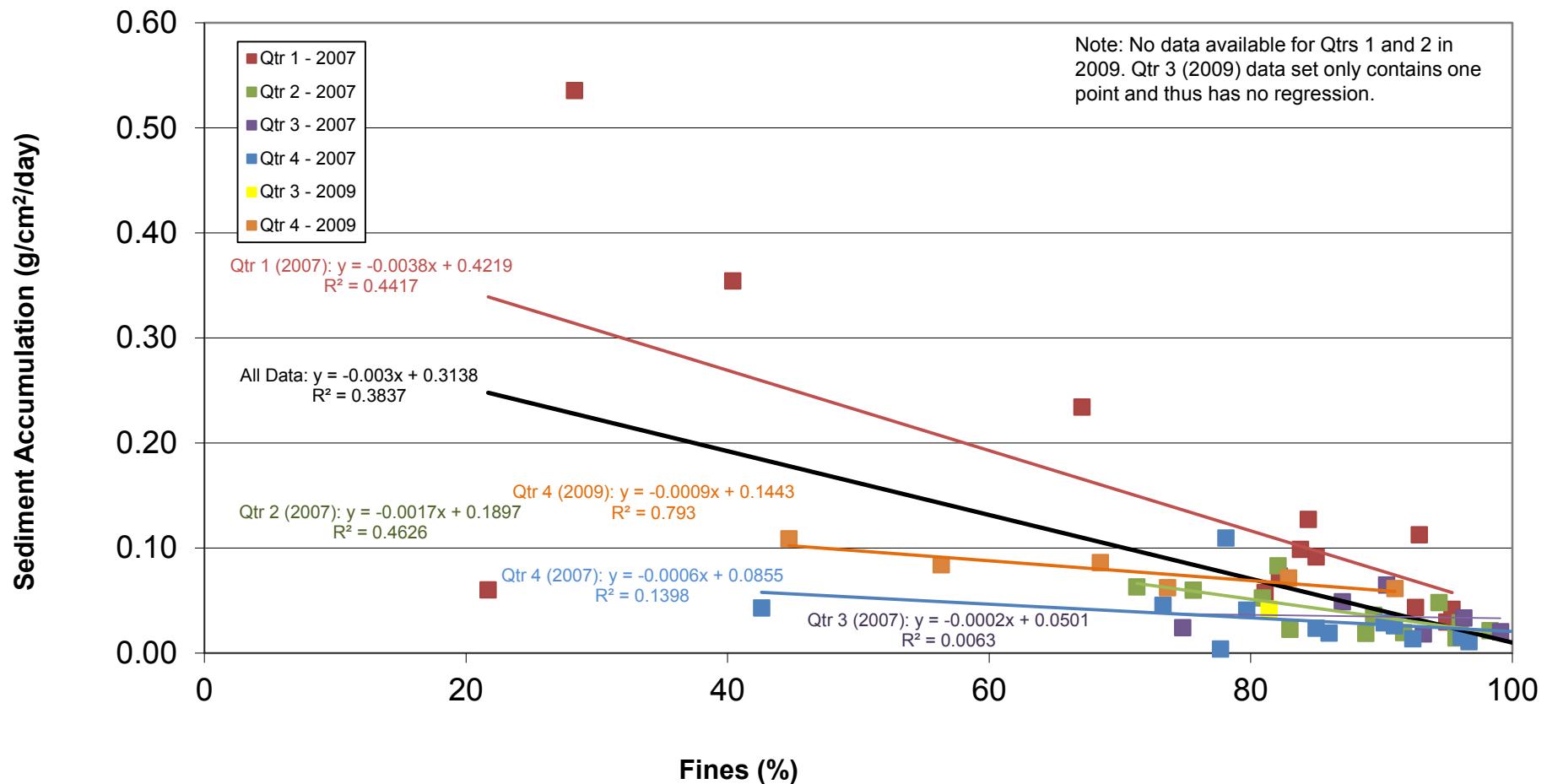


Figure 5.3-16
Portland Harbor RI/FS
Remedial Investigation Report
Regression of Sediment Accumulation Rate of Trapped
Sediment for In-River Sediment Trap Sampling

Sediment Trap PCB Congers as a Function of Aroclors

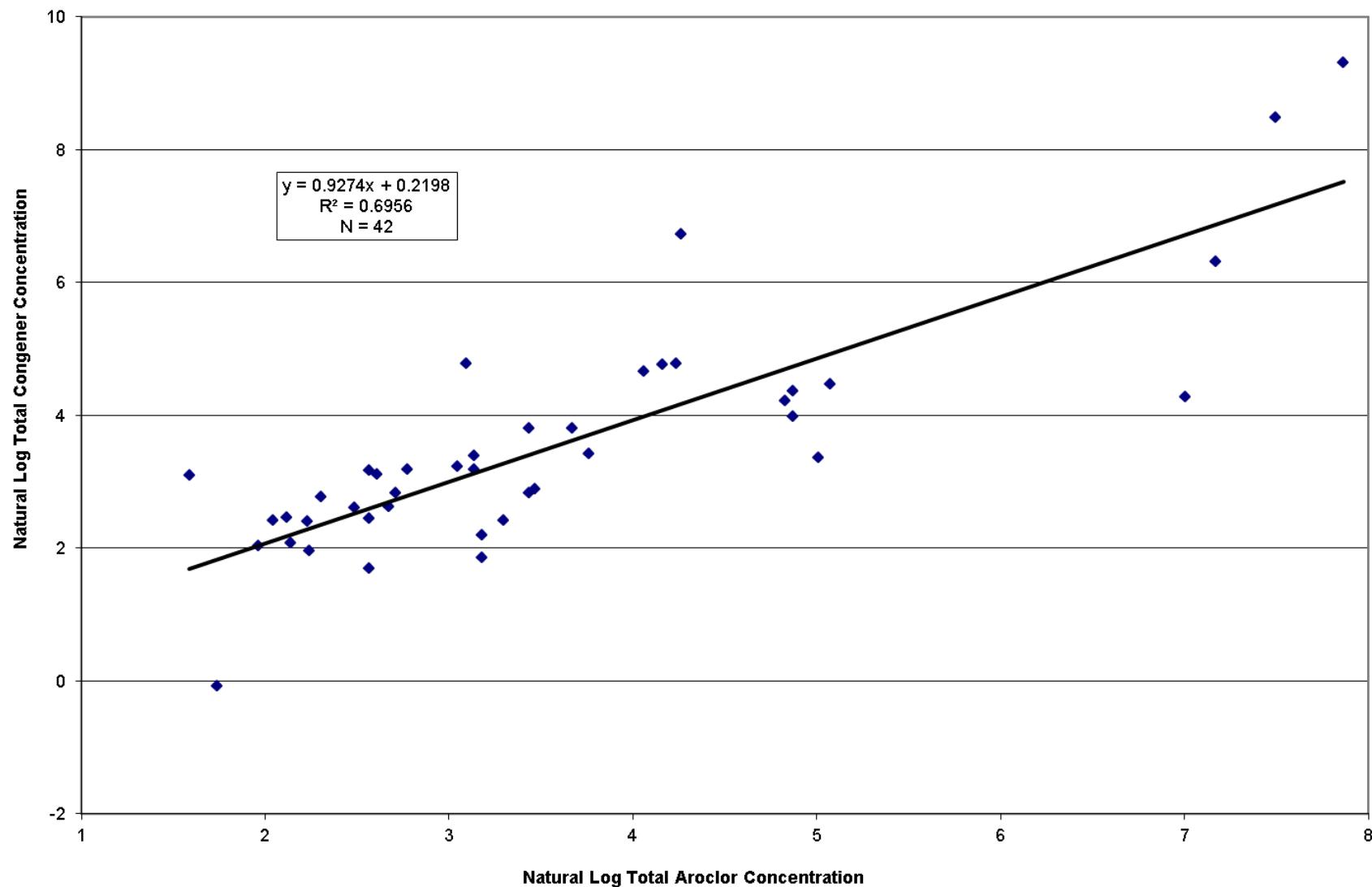
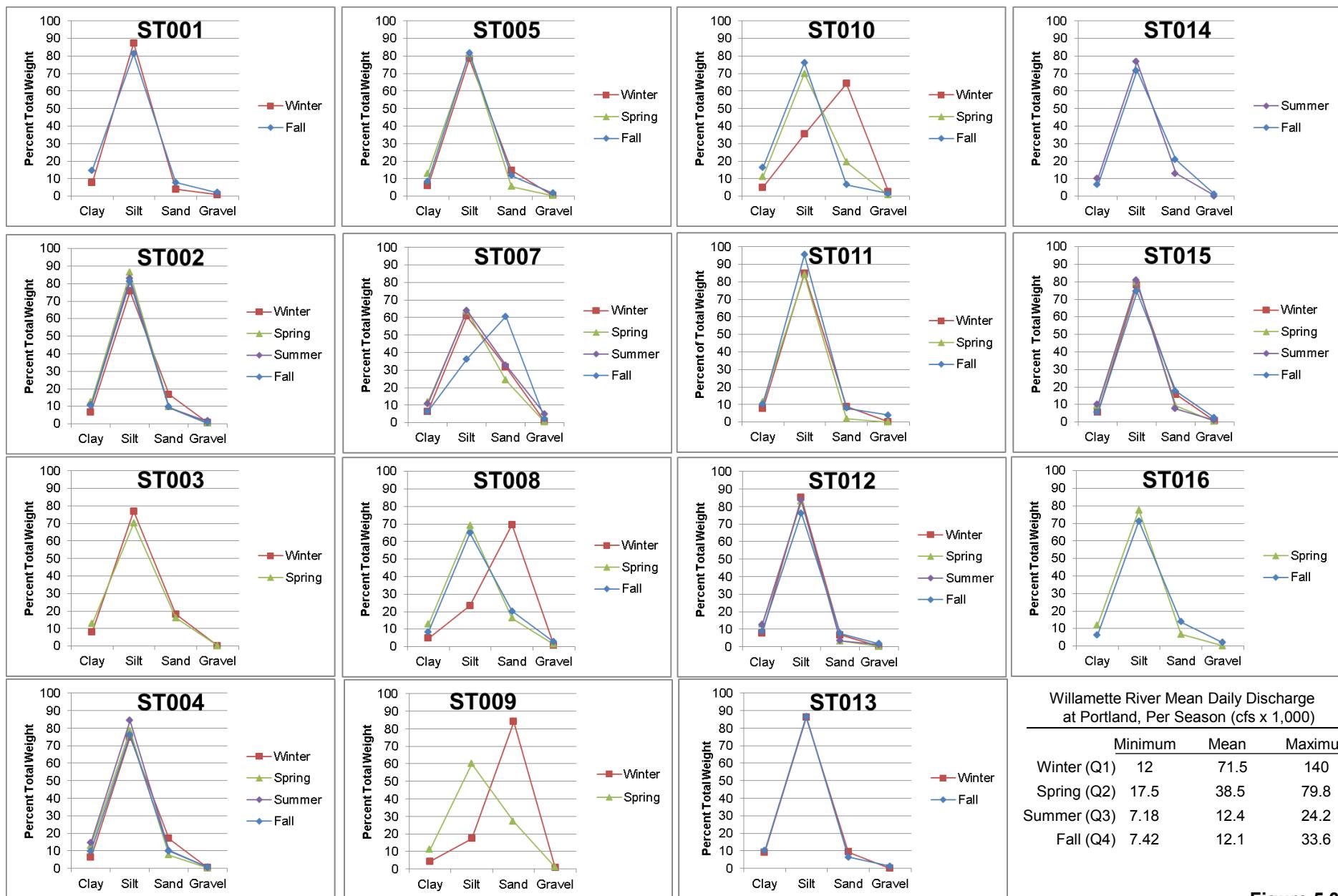


Figure 5.3-17
Portland Harbor RI/FS
Remedial Investigation Report
Regression of Total PCB Congener and PCB Aroclor
Concentrations for In-River Sediment Traps



Willamette River Mean Daily Discharge
at Portland, Per Season (cfs x 1,000)

	Minimum	Mean	Maximum
Winter (Q1)	12	71.5	140
Spring (Q2)	17.5	38.5	79.8
Summer (Q3)	7.18	12.4	24.2
Fall (Q4)	7.42	12.1	33.6

Figure 5.3-18a
Portland Harbor RI/FS
Remedial Investigation Report
Grain Size Distribution of Sediment Trap
Samples by Quarter, 2007

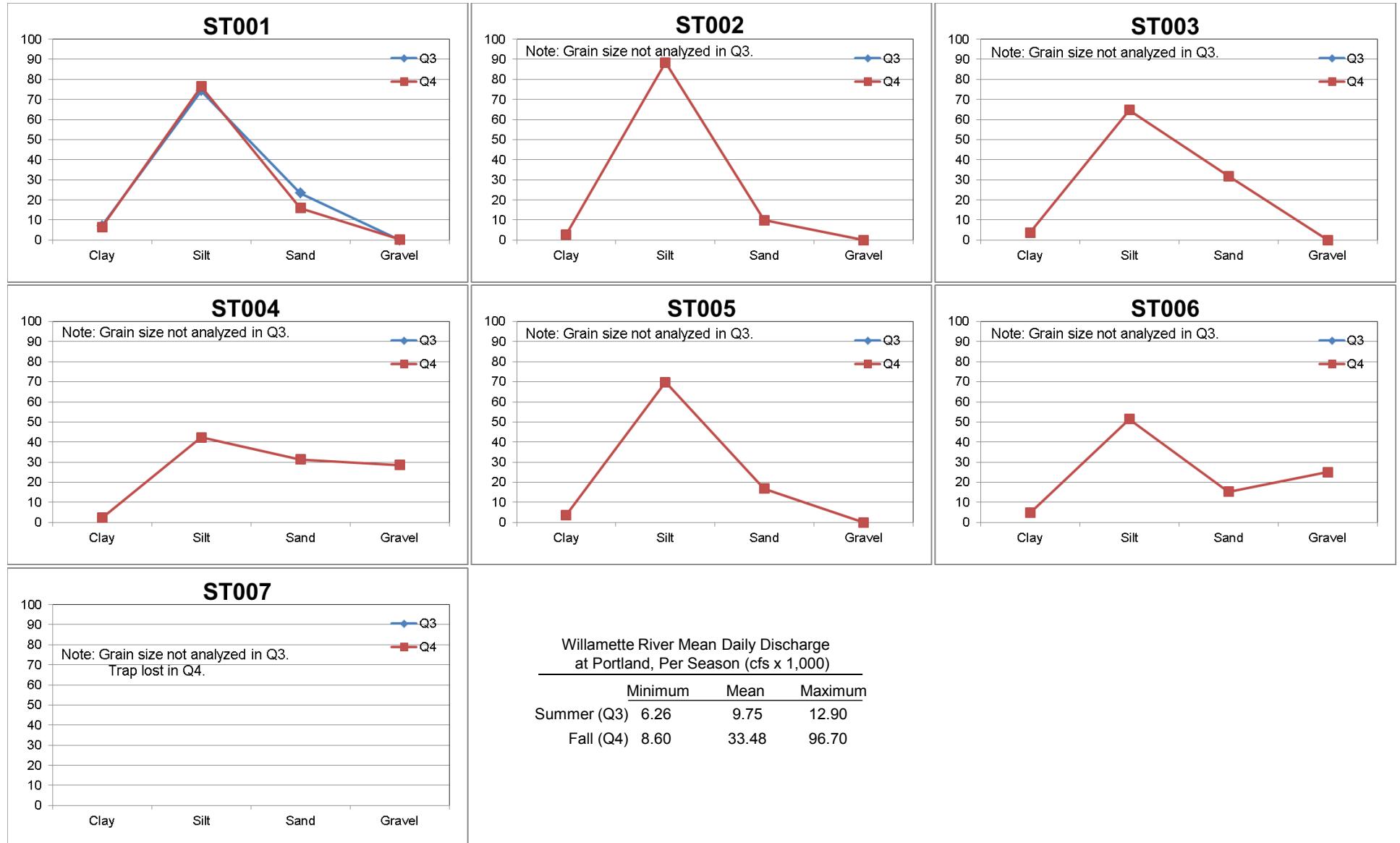


Figure 5.3-18b
Portland Harbor RI/FS
Remedial Investigation Report
Grain Size Distribution of Sediment Trap
Samples by Quarter, 2009

Sediment Trap Sampling Events with Hydrographs (Daily and Average)
October 1, 2006- December 31, 2007

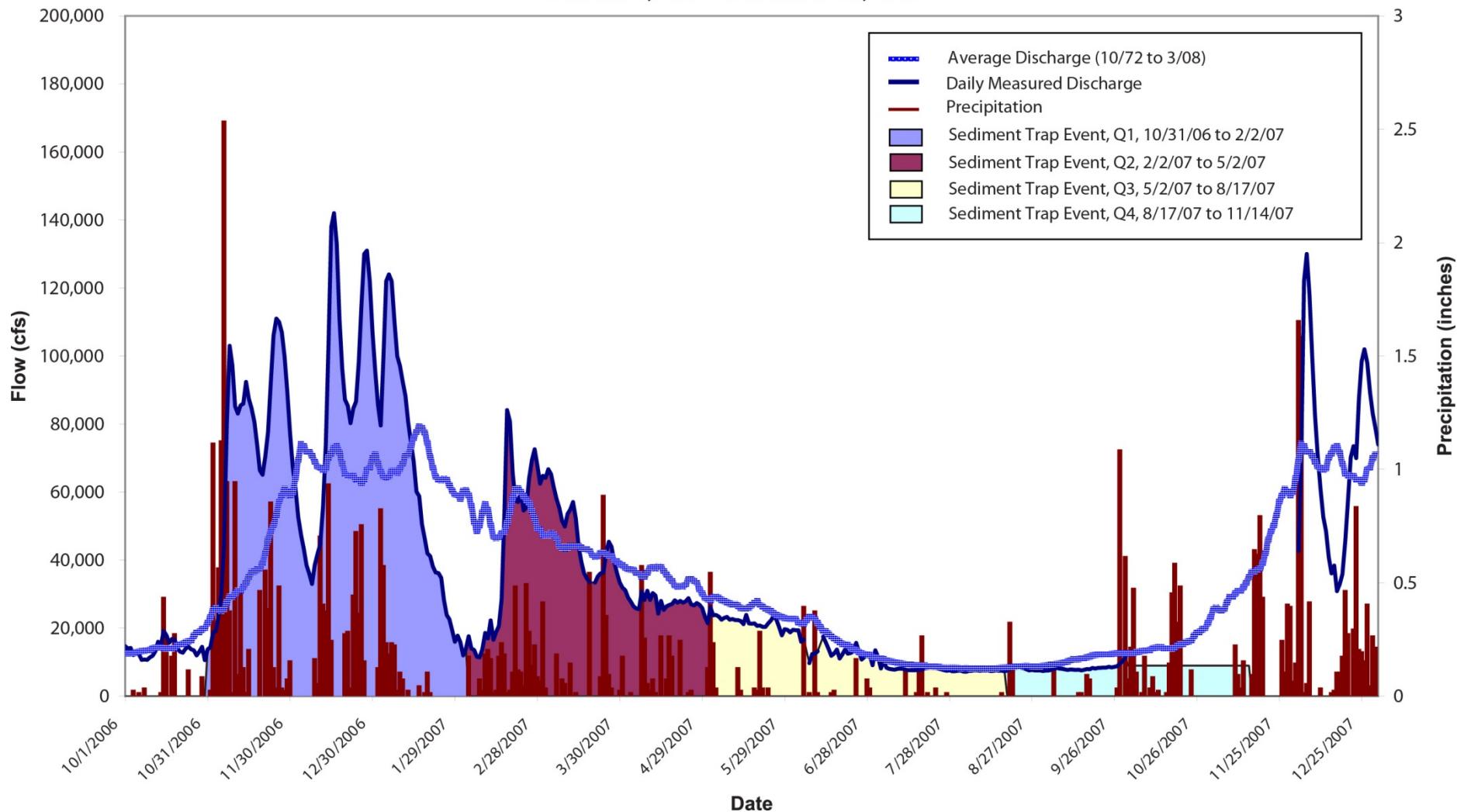


Figure 5.3-19a
Portland Harbor RI/FS
Remedial Investigation Report
Hydrograph of the Willamette River at Portland
During In-River Sediment Trap Sampling

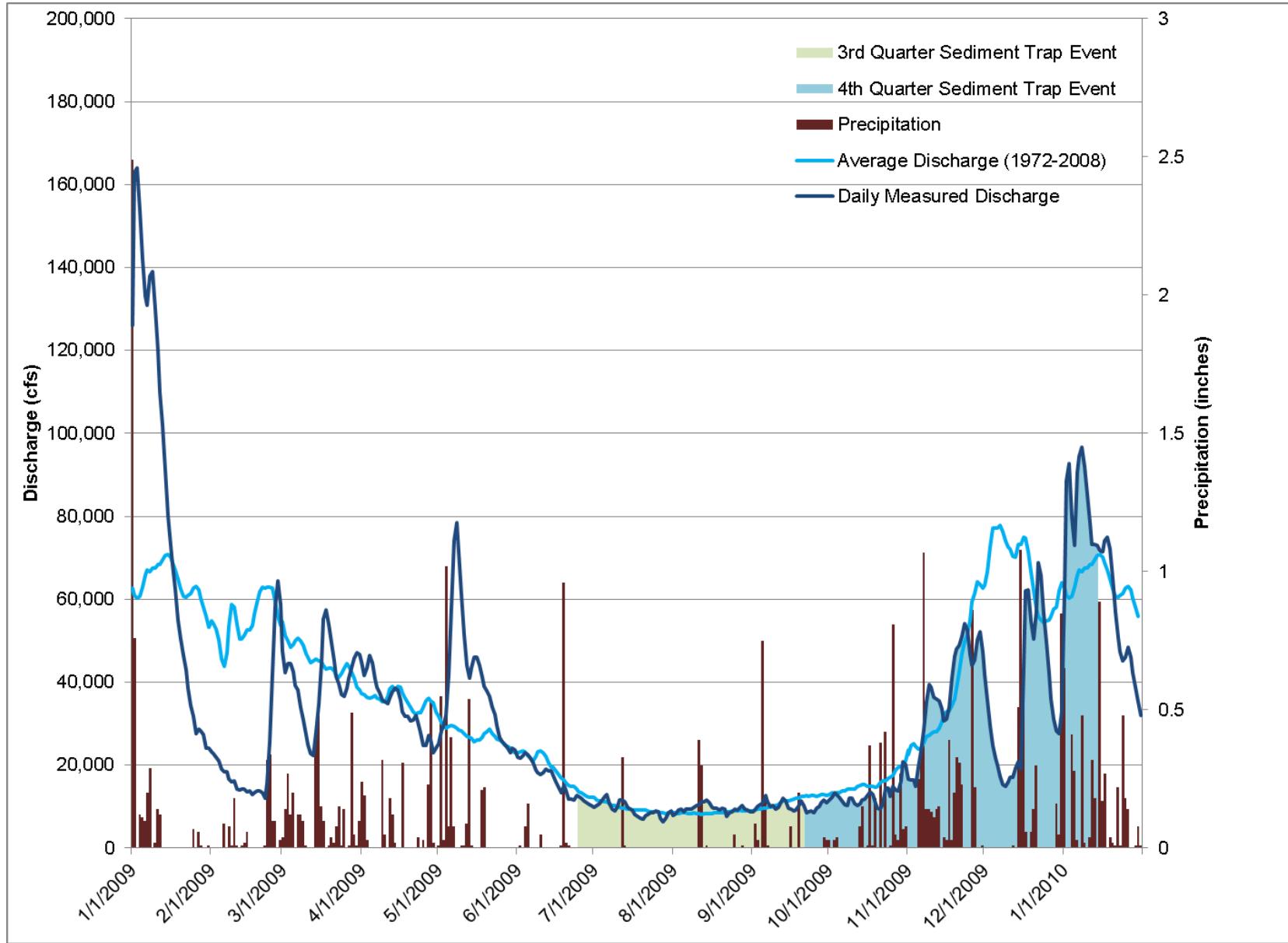


Figure 5.3-19b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Hydrograph of the Willamette River at Portland
 During In-River Sediment Trap Sampling

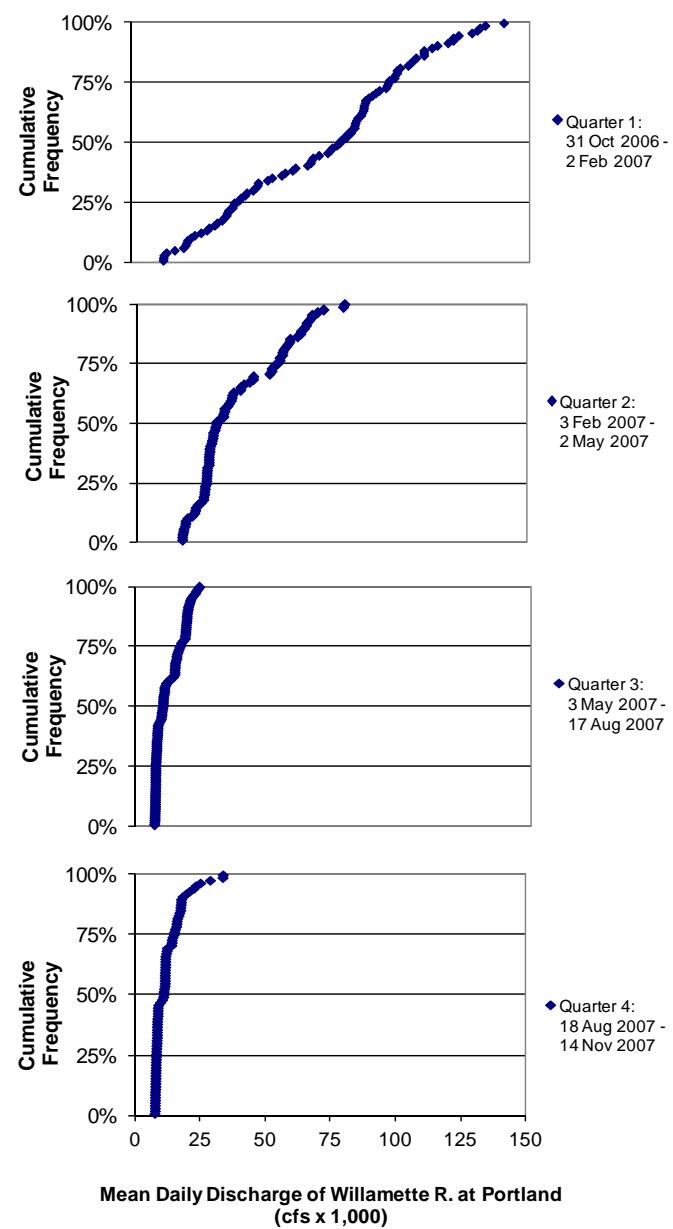
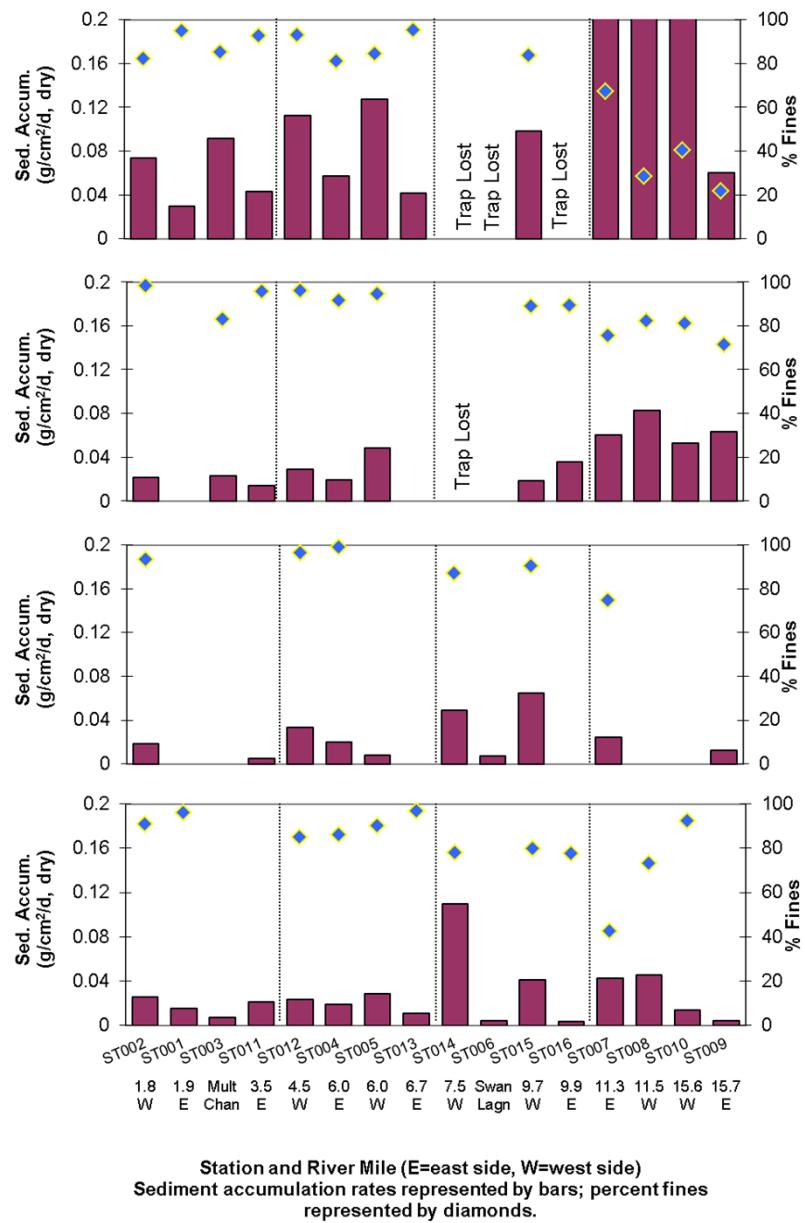


Figure 5.3-20a
Portland Harbor RI/FS
Remedial Investigation Report
Histograms of Sediment Accumulation Rates by Quarter and
Corresponding Frequency Distribution of
Willamette River Discharge, 2007

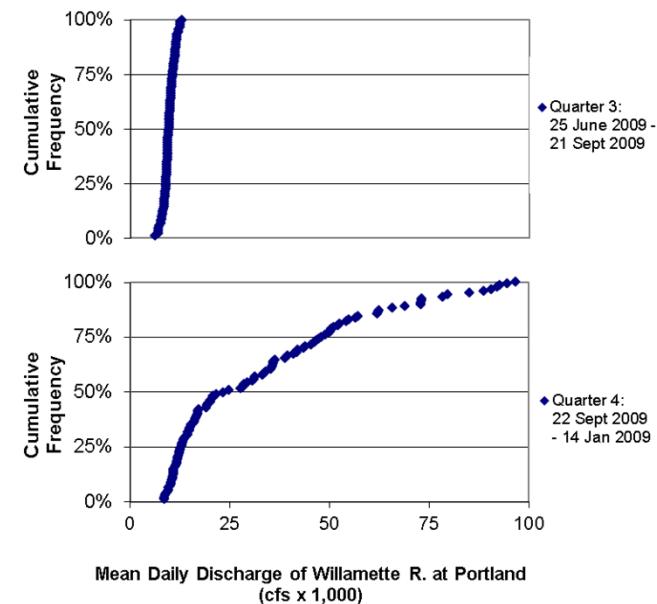
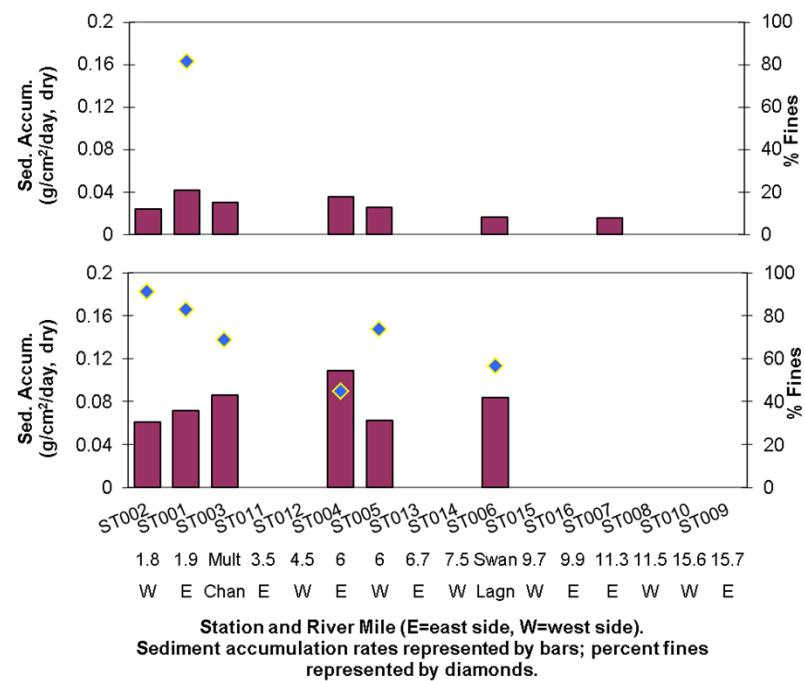
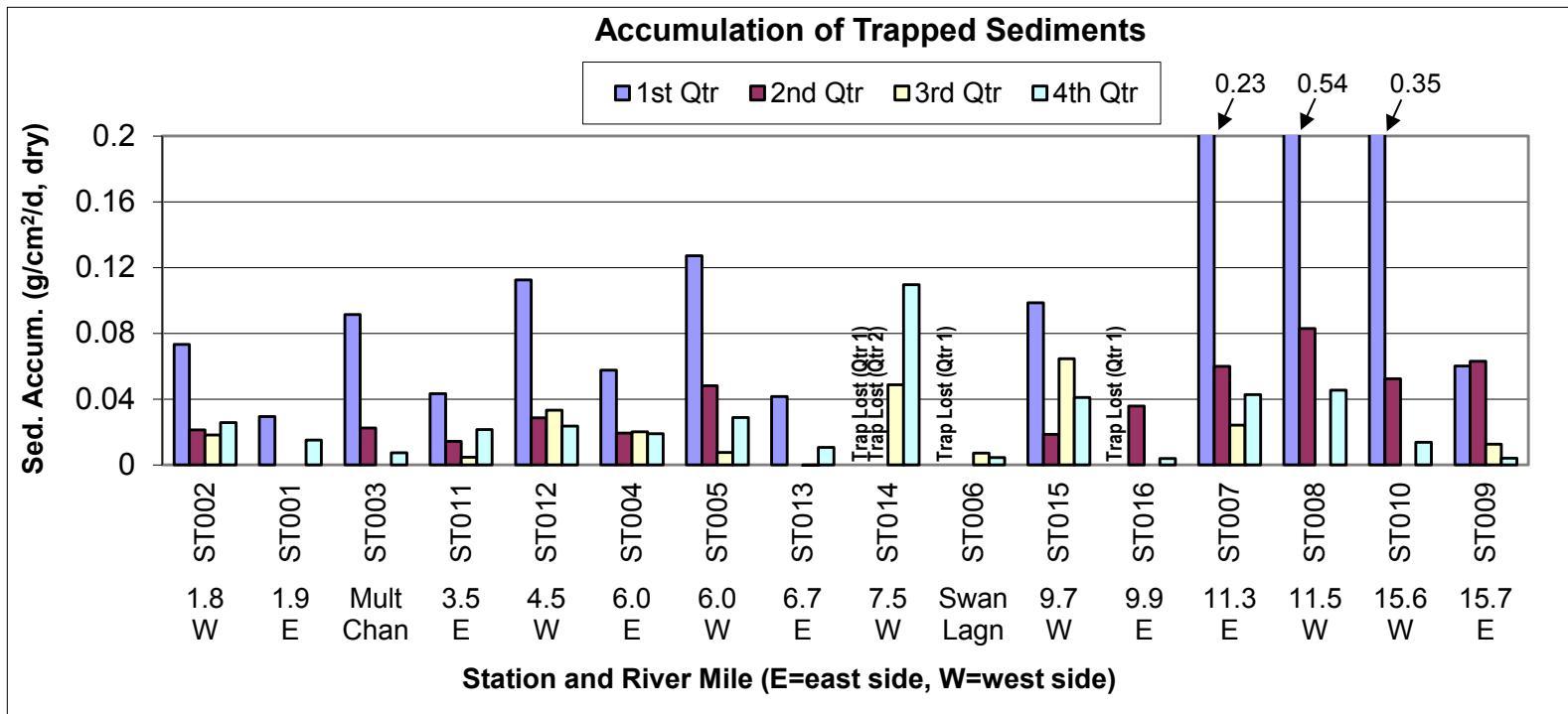
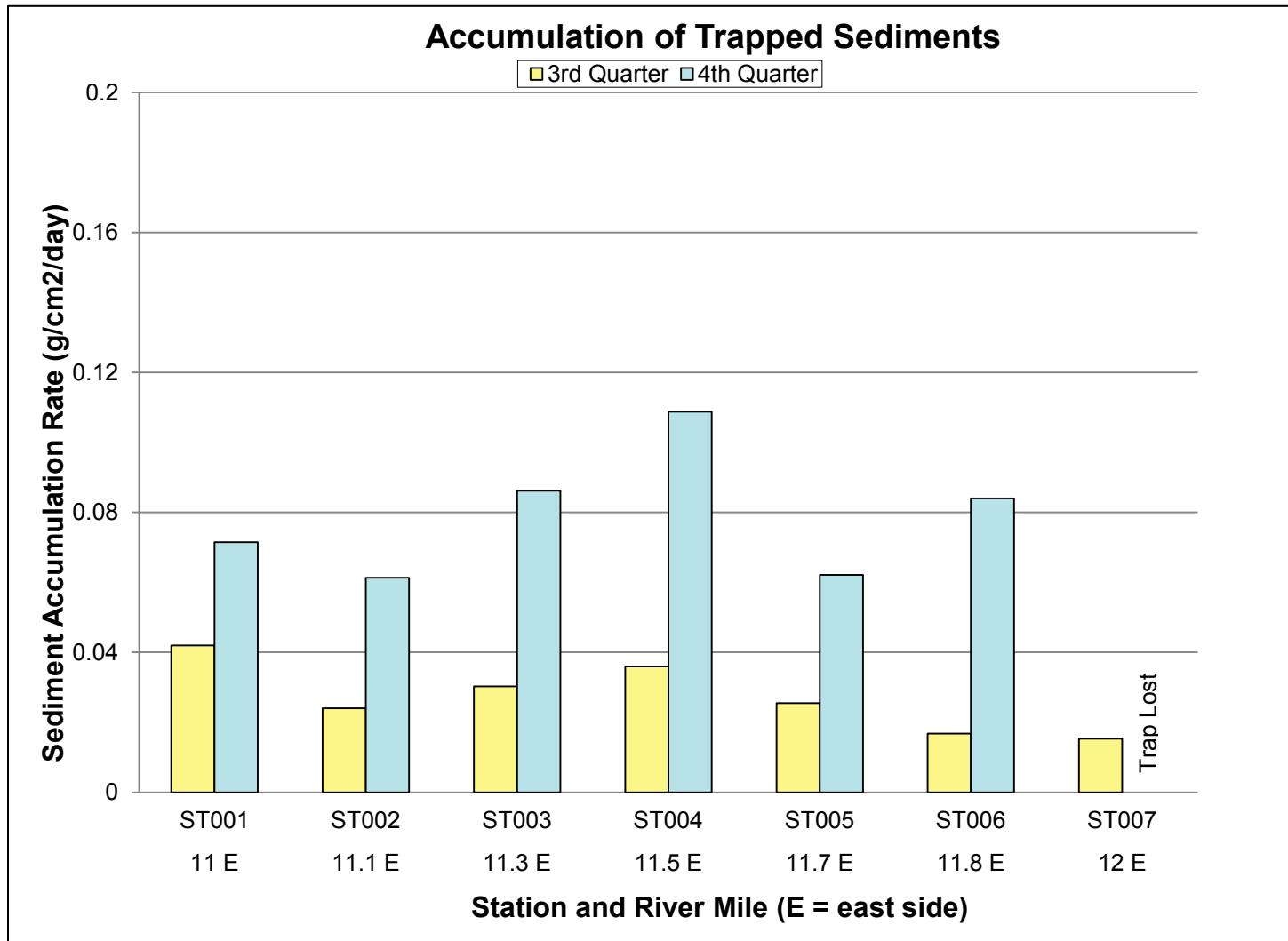


Figure 5.3-20b
Portland Harbor RI/FS
Remedial Investigation Report
Histograms of Sediment Accumulation Rates by Quarter and
Corresponding Frequency Distribution of
Willamette River Discharge, 2009



Note: Blank spaces within station groupings indicate that the quarterly volume of material collected was not sufficient for analysis.

Figure 5.3-21a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Accumulation Rate of Trapped Sediment
 for In-River Sediment Trap Sampling 2007



Note: Samples were not collected in the 1st and 2nd quarters.

Figure 5.3-21b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Accumulation Rate of Trapped Sediment
 for In-River Sediment Trap Sampling, 2009

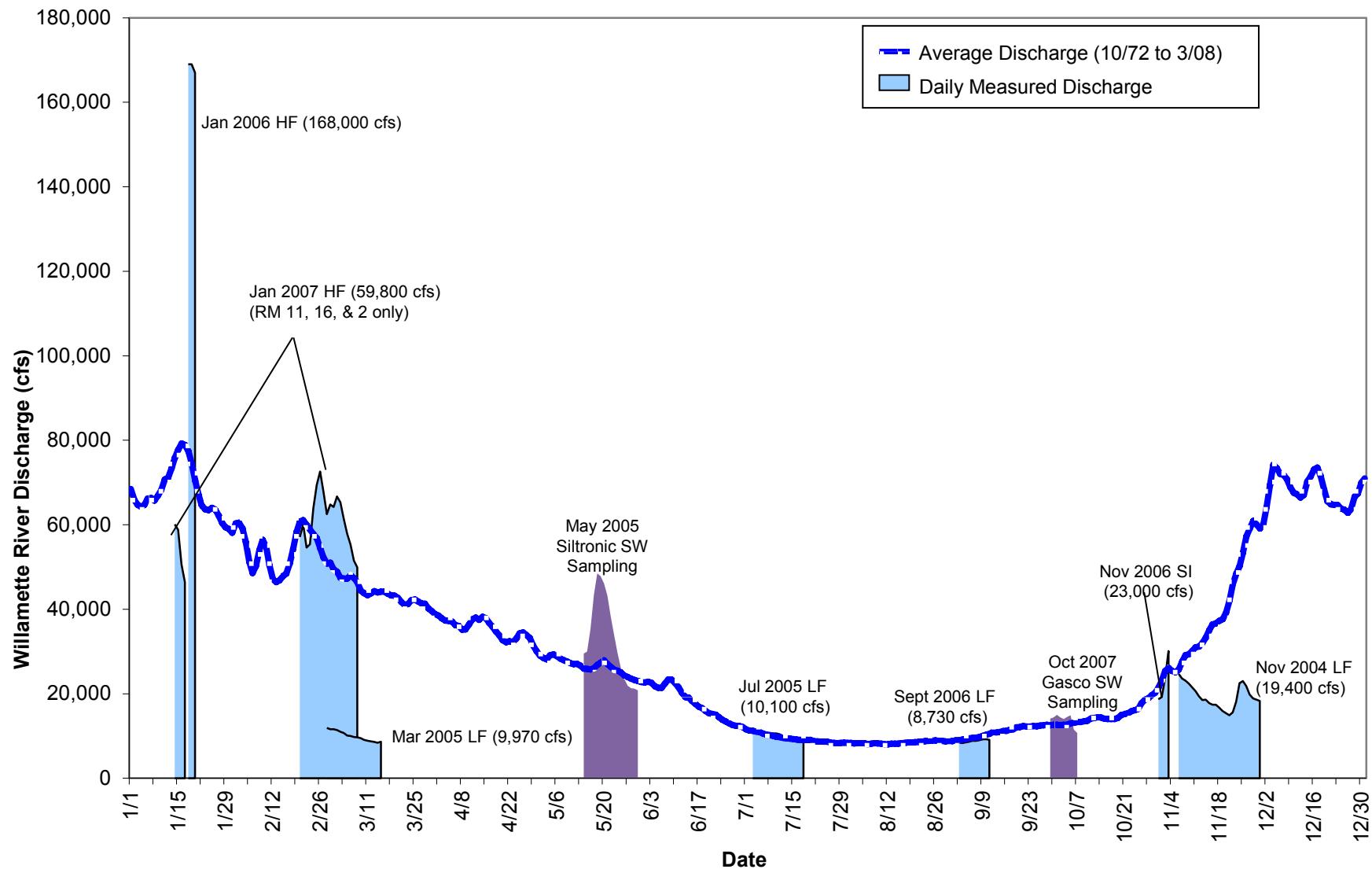


Figure 5.4-1
 Portland Harbor RI/FS
 Remedial Investigation Report
 Hydrograph of Willamette River Comparing Average Daily Discharge
 for Period of Record (1972-2008) and Average Daily Discharge
 During Individual Surface Water Sampling Events by Day of Year

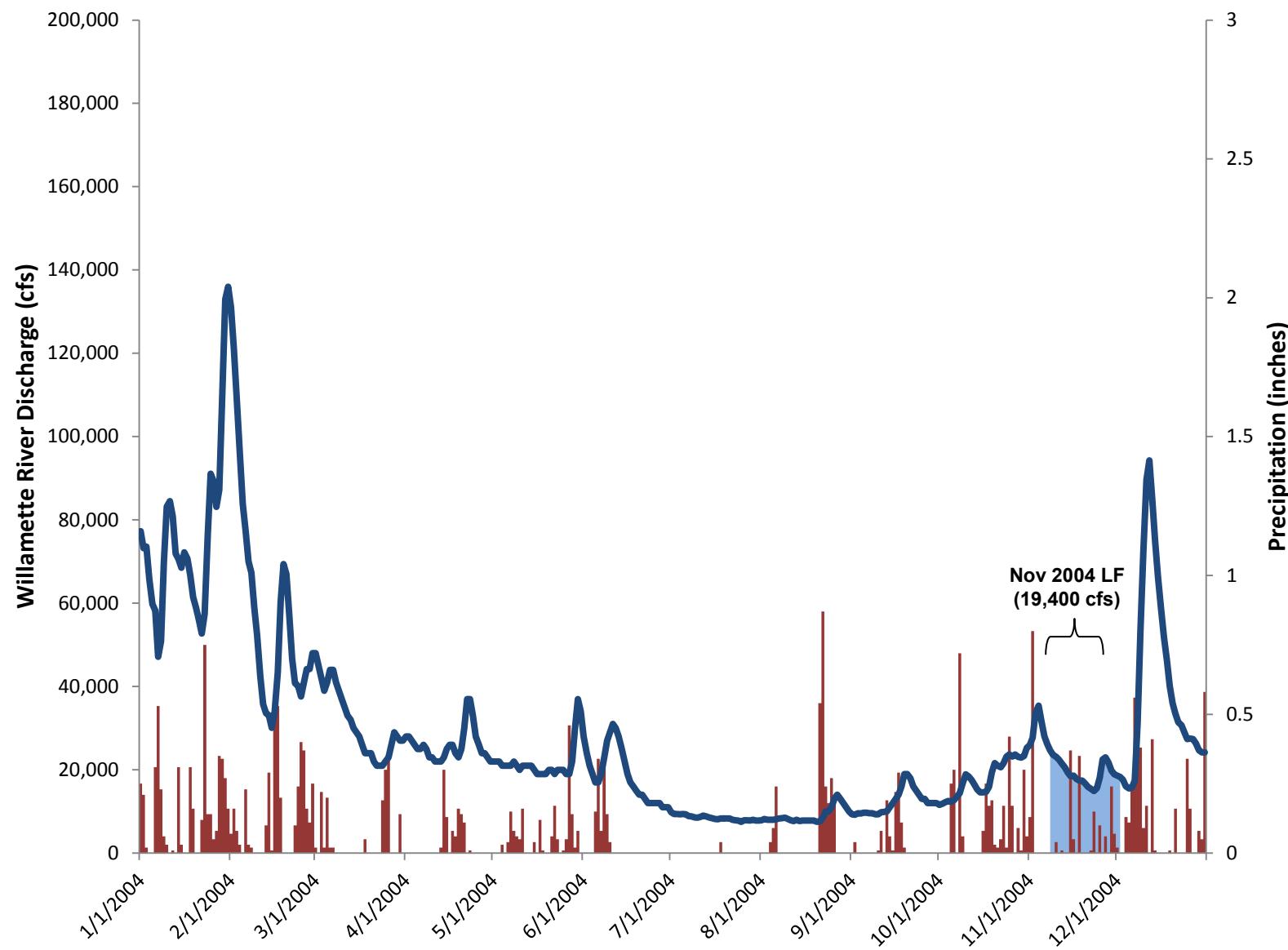


Figure 5.4-2a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Hydrograph of Average Daily Discharge for Willamette River (1972-2008)
 and Daily Discharge during Surface Water Sampling Events by Day of
 Year with Hyetograph of Precipitation Events (2004)

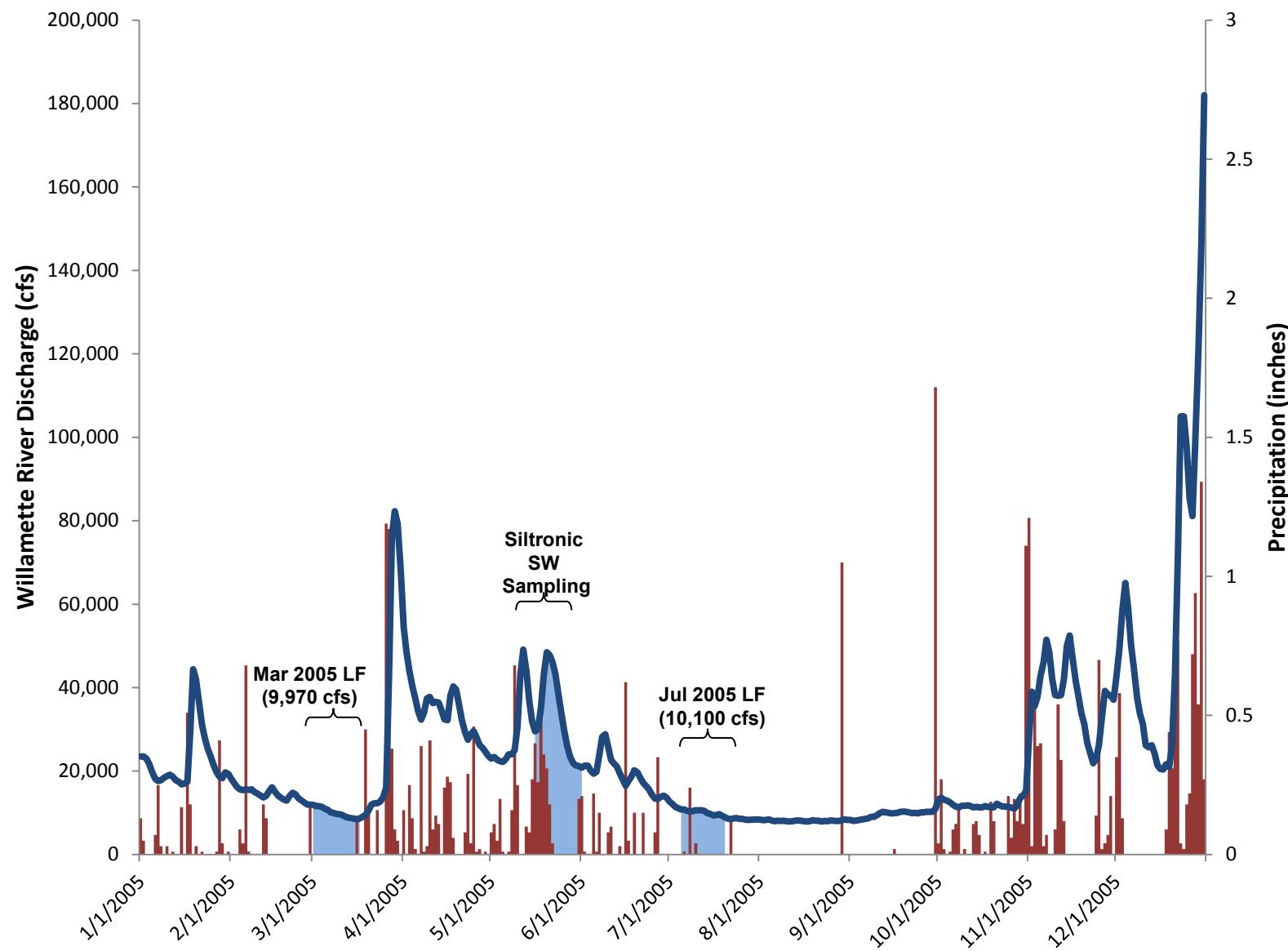


Figure 5.4-2b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Hydrograph of Average Daily Discharge for Willamette River (1972-2008)
 and Daily Discharge during Surface Water Sampling Events by Day of
 Year with Hyetograph of Precipitation Events (2005)

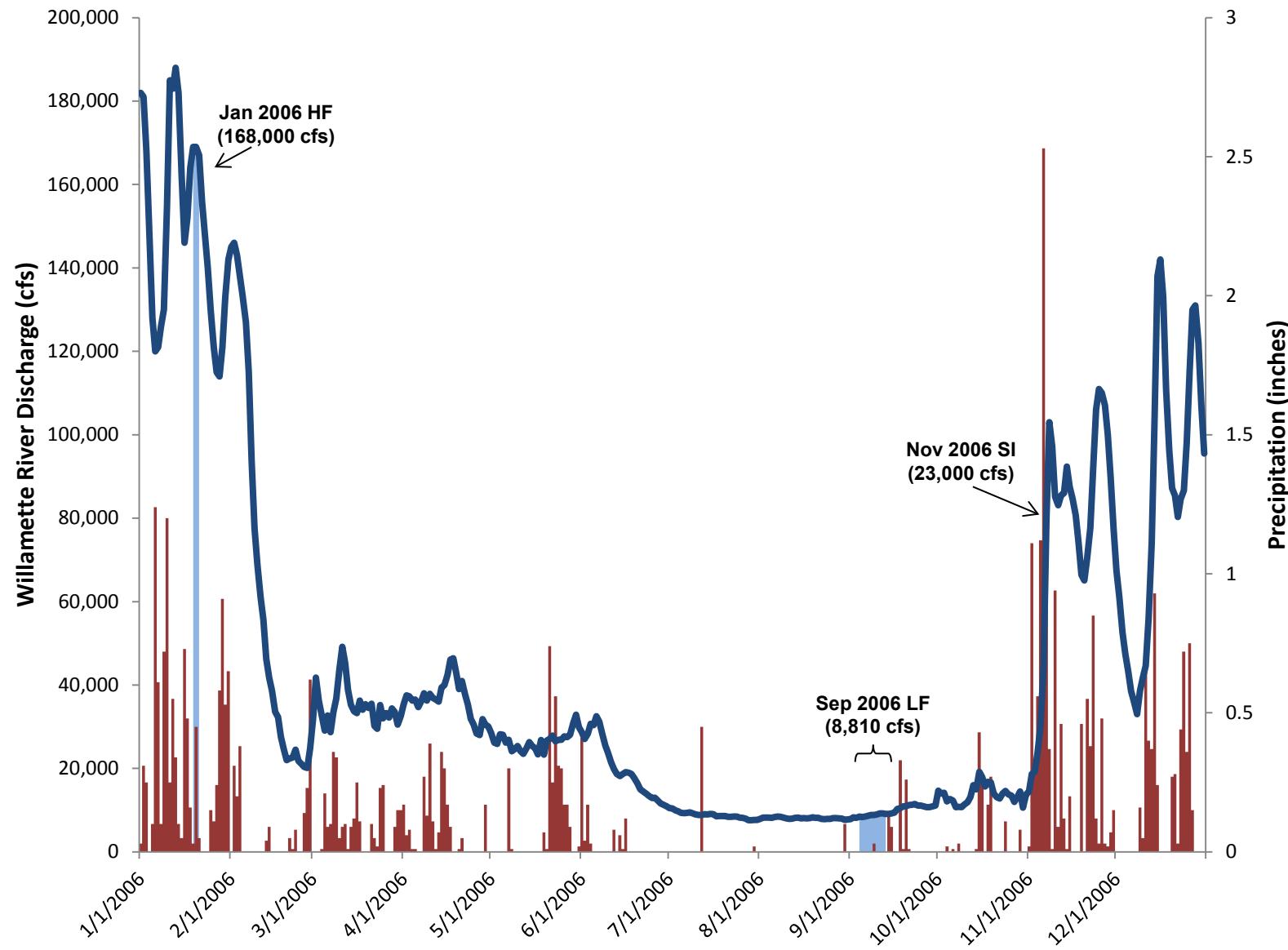


Figure 5.4-2c
 Portland Harbor RI/FS
 Remedial Investigation Report
 Hydrograph of Average Daily Discharge for Willamette River (1972-2008)
 and Daily Discharge during Surface Water Sampling Events by Day of
 Year with Hyetograph of Precipitation Events (2006)

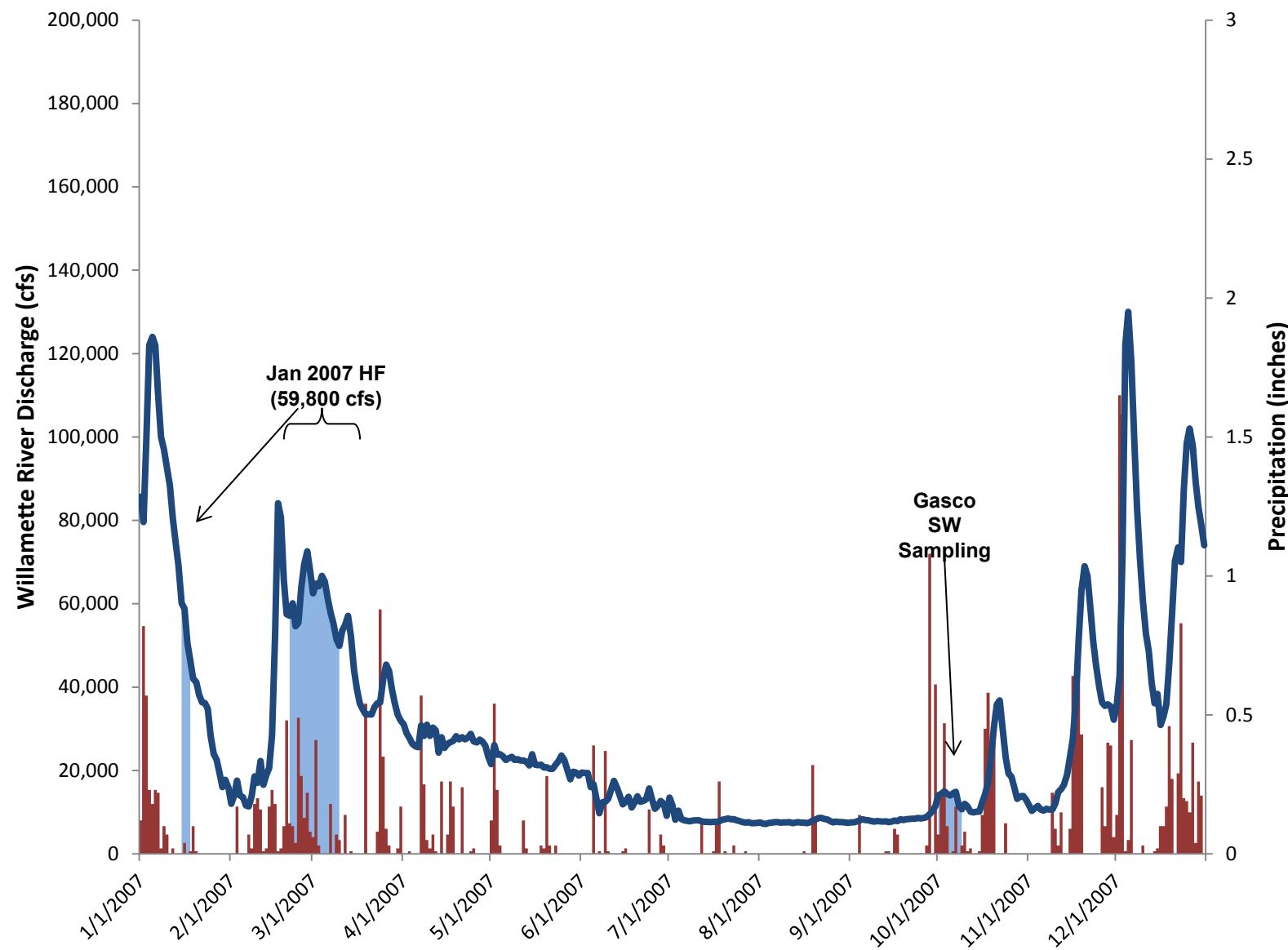
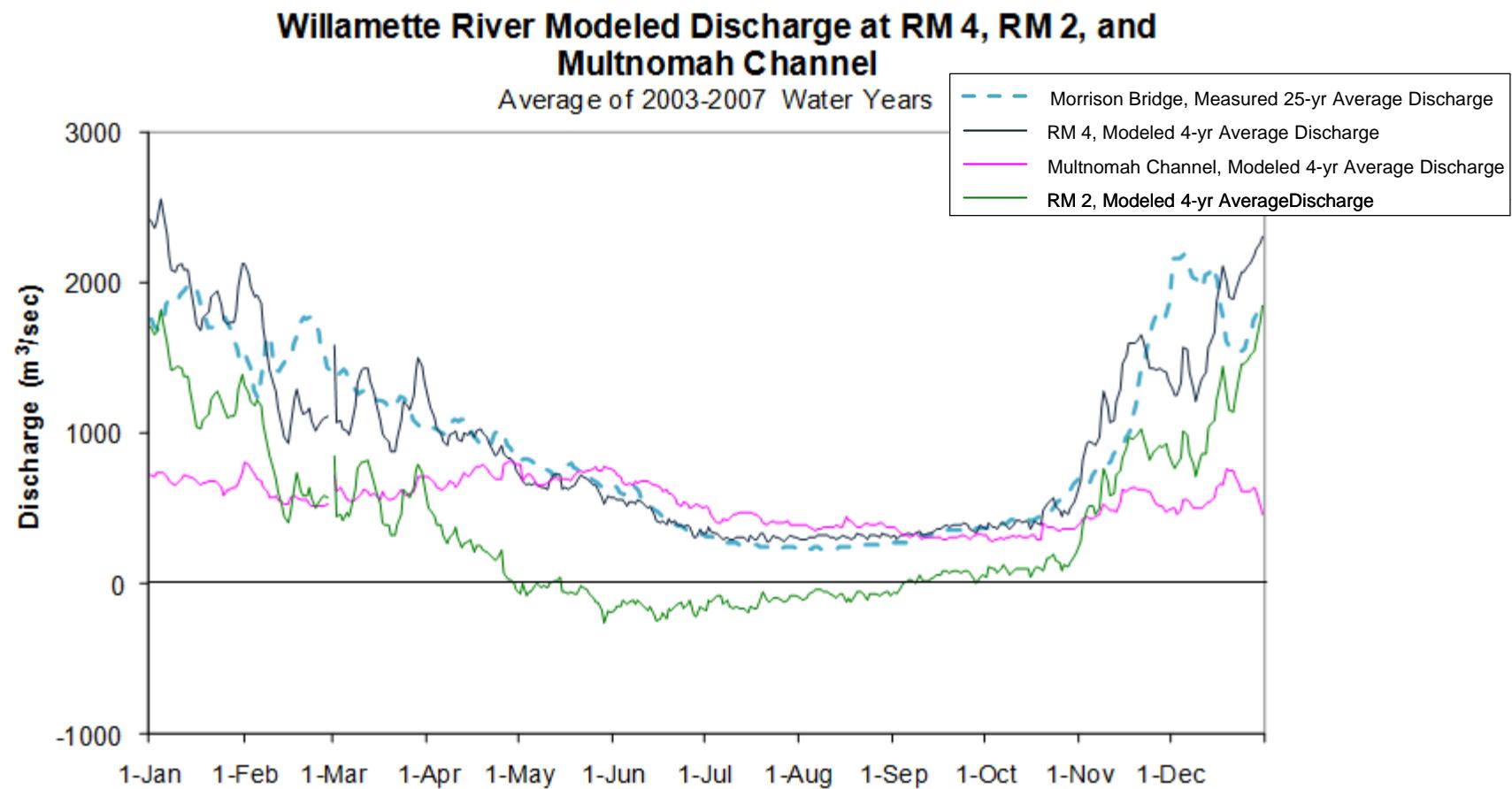


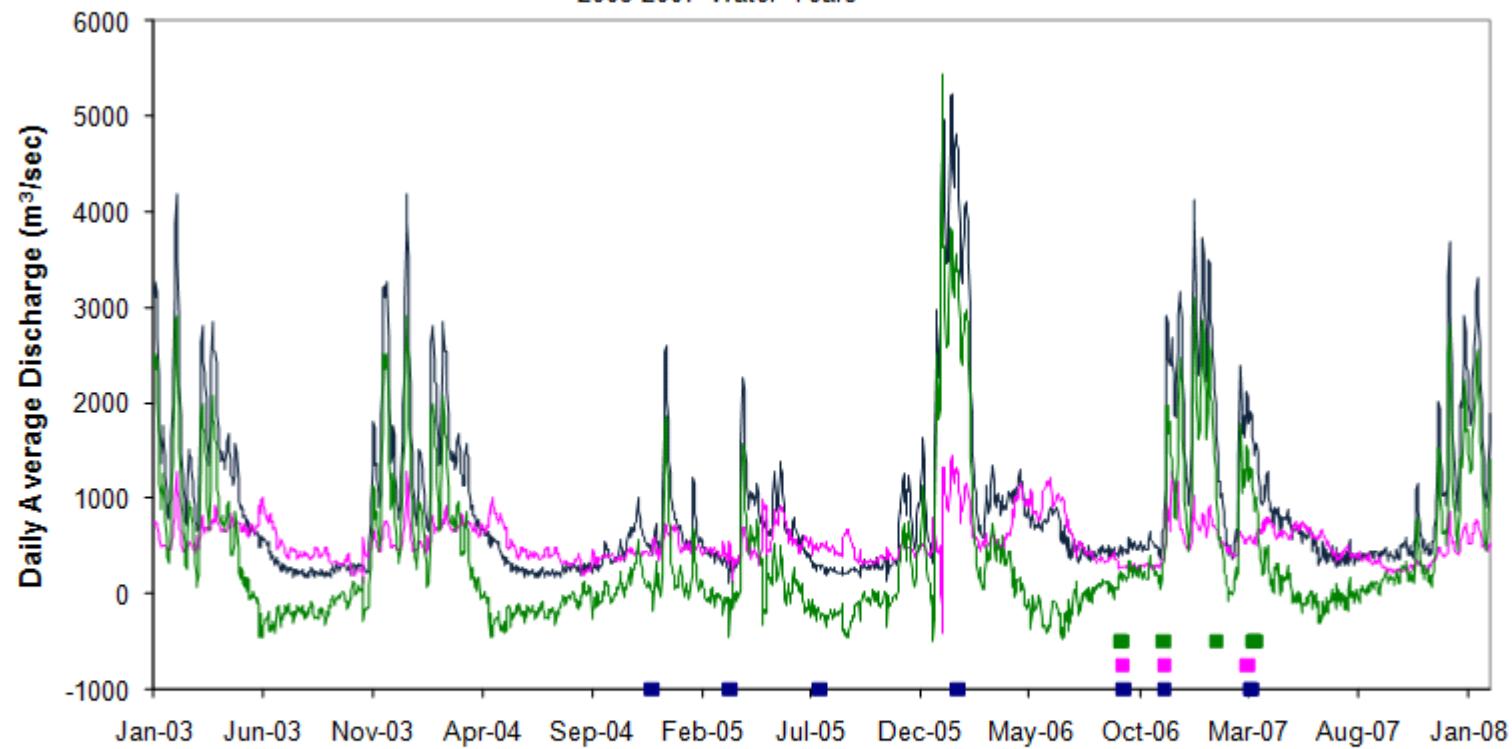
Figure 5.4-2d
 Portland Harbor RI/FS
 Remedial Investigation Report
 Hydrograph of Average Daily Discharge for Willamette River (1972-2008)
 and Daily Discharge during Surface Water Sampling Events by Day of
 Year with Hyetograph of Precipitation Events (2007)



Note: Discharge values below 0 m^3/sec indicate flow direction reversal from downstream to upstream.

Figure 5.4-3
 Portland Harbor RI/FS
 Remedial Investigation Report
 Hydrograph of Willamette River Comparing Measured Average Daily
 Discharge with Modeled Average Daily Discharge at RM 4, RM 2, and
 Multnomah Channel by Day of Year (2003–2007)

**Willamette River Modeled Discharge
at RM 4, RM 2, and Multnomah Channel**
2003-2007 Water Years



Note: Discharge values below 0 m³/sec indicate flow direction reversal from downstream to upstream.

- | |
|---|
| — RM 4, Modeled Discharge |
| — Multnomah Channel, Modeled Discharge |
| — RM 2, Modeled Discharge |
| ■ RM 2 Surface Water Sample Events |
| ■ Multnomah Channel Surface Water Sampling Events |
| ■ RM 4 Surface Water Sampling Events |

Figure 5.4-4
Portland Harbor RI/FS
Remedial Investigation Report
Hydrograph of Willamette River Presenting Modeled Daily Average
Discharge at RM 4, RM 2, and Multnomah Channel for Each Day
During Period 2003–2007

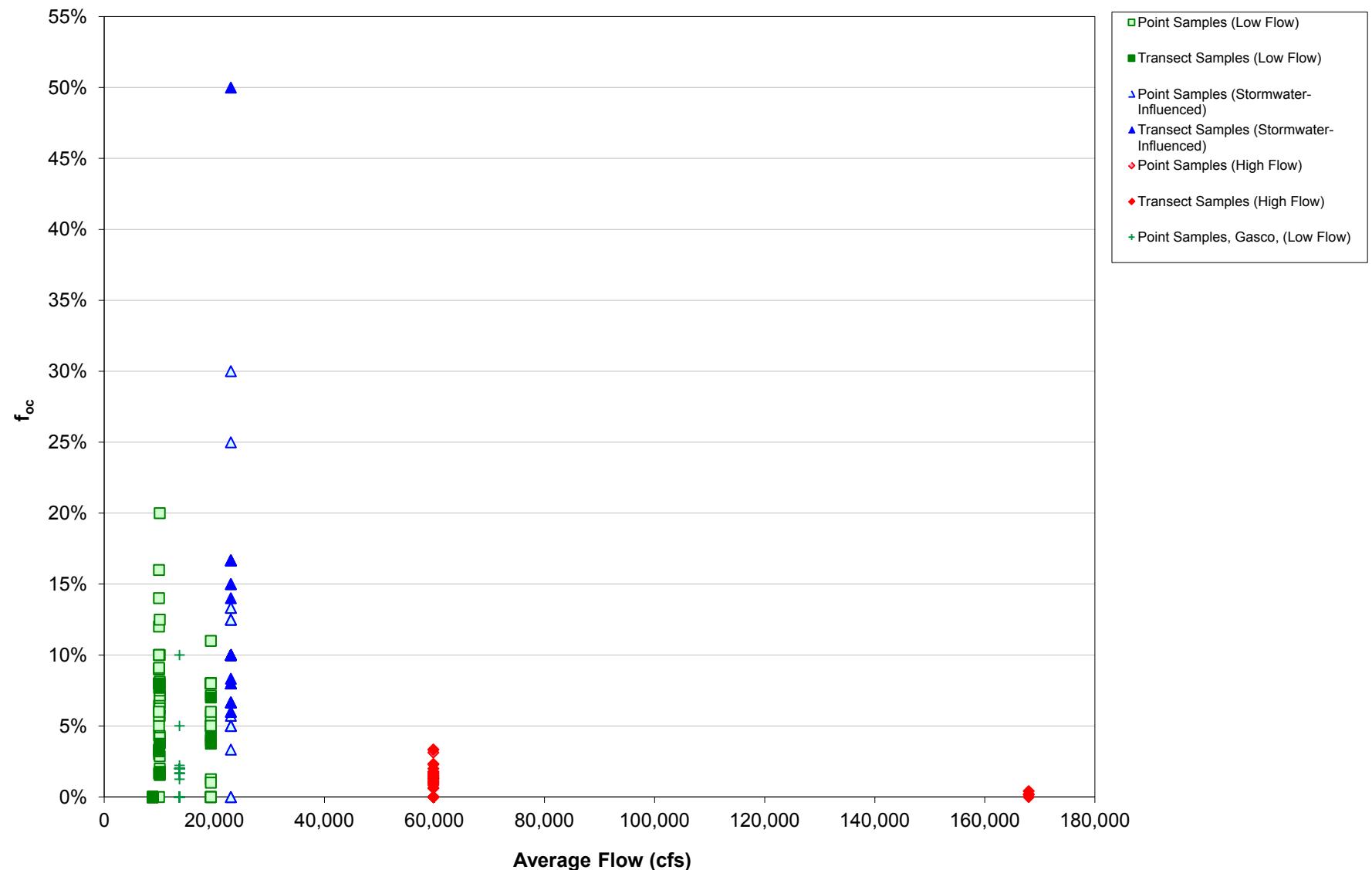


Figure 5.4-5
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Organic Carbon Content vs. Flow Rate in
Surface Water, RM 2-16 (Peristaltic)

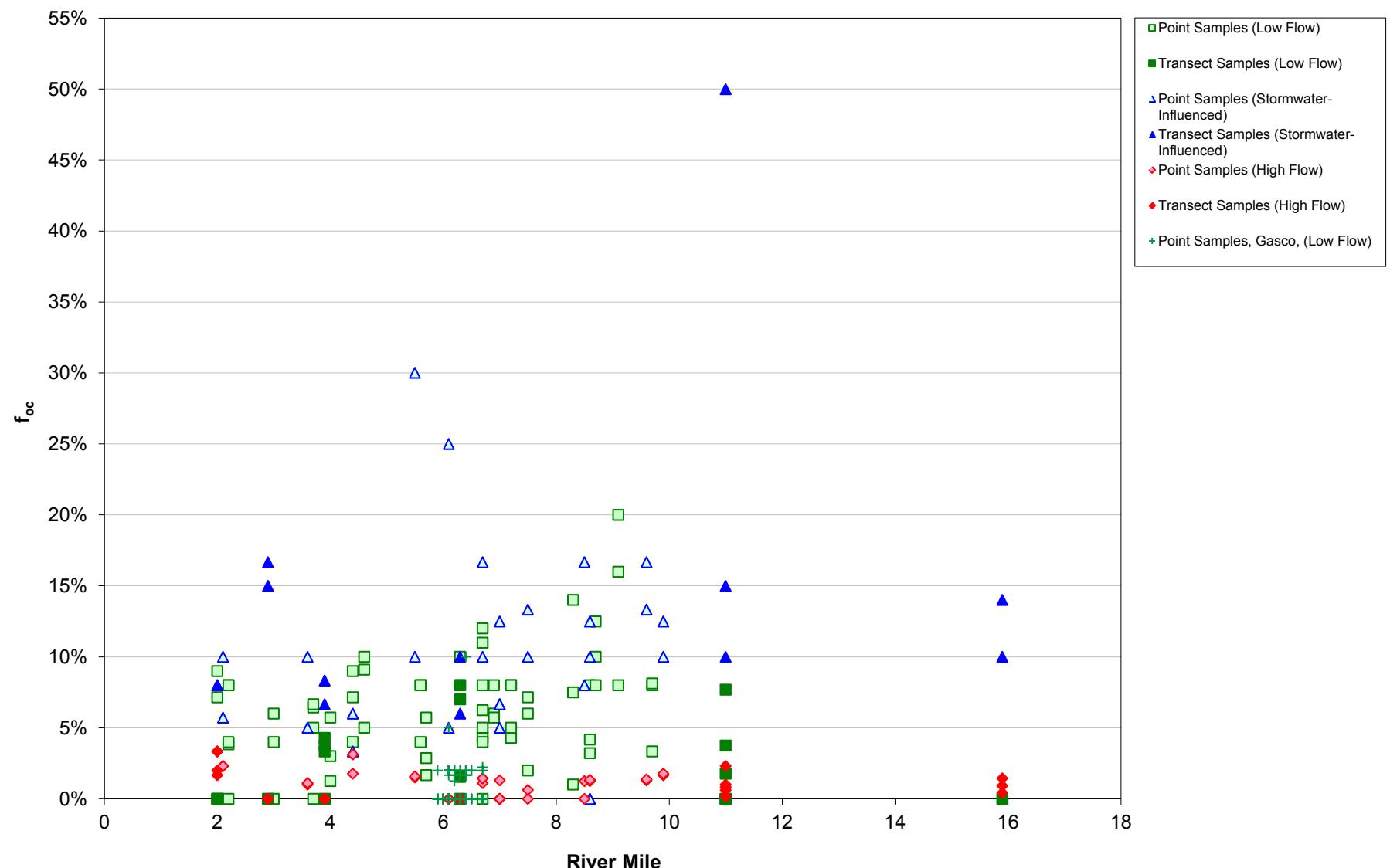


Figure 5.4-6
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Organic Carbon Content vs. River Mile in
 Surface Water, RM 2-16 (Peristaltic)

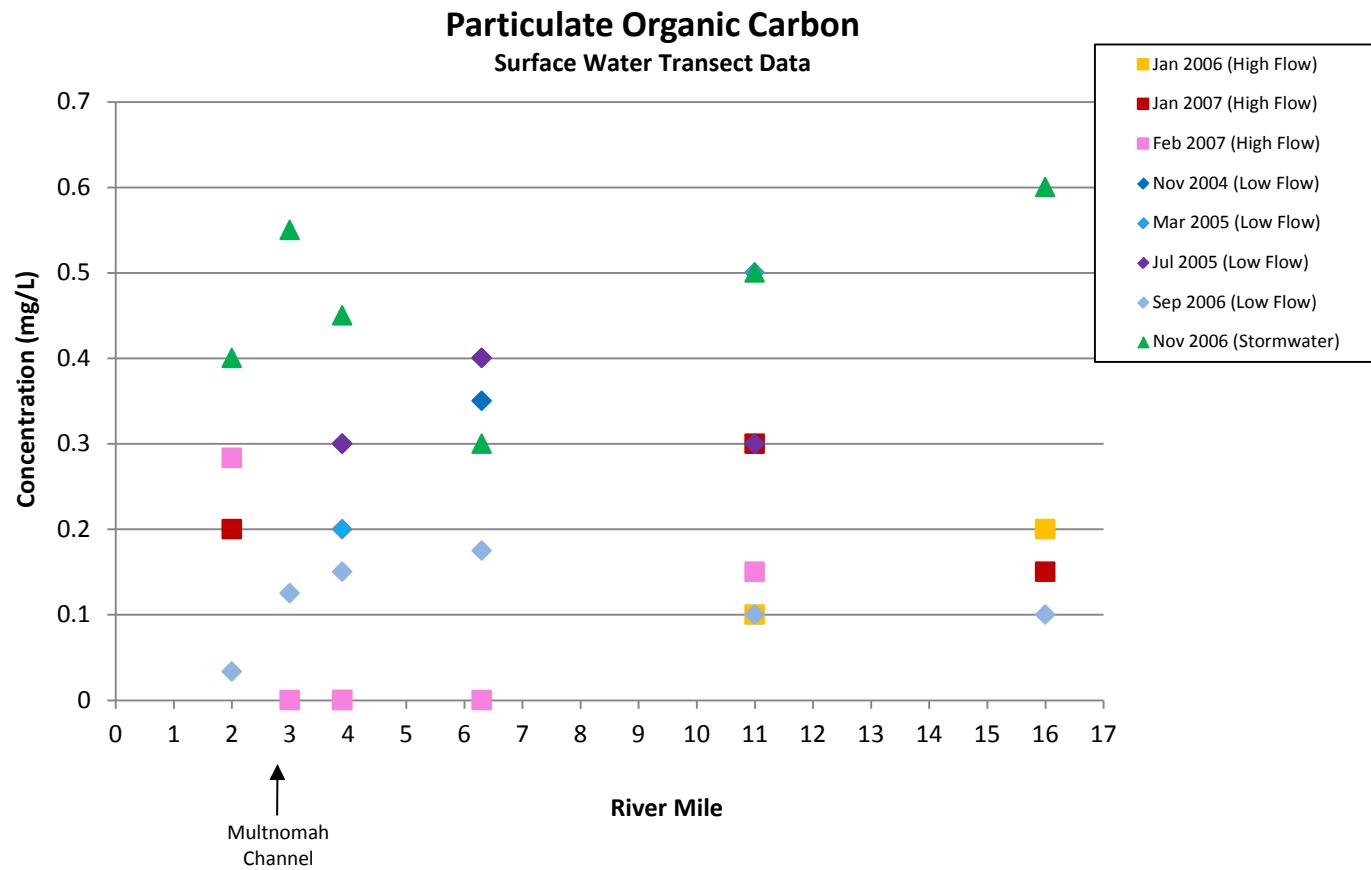


Figure 5.4-7
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plots of Concentration at Surface Water Transect
Stations by Sample Event –Particulate Organic Carbon

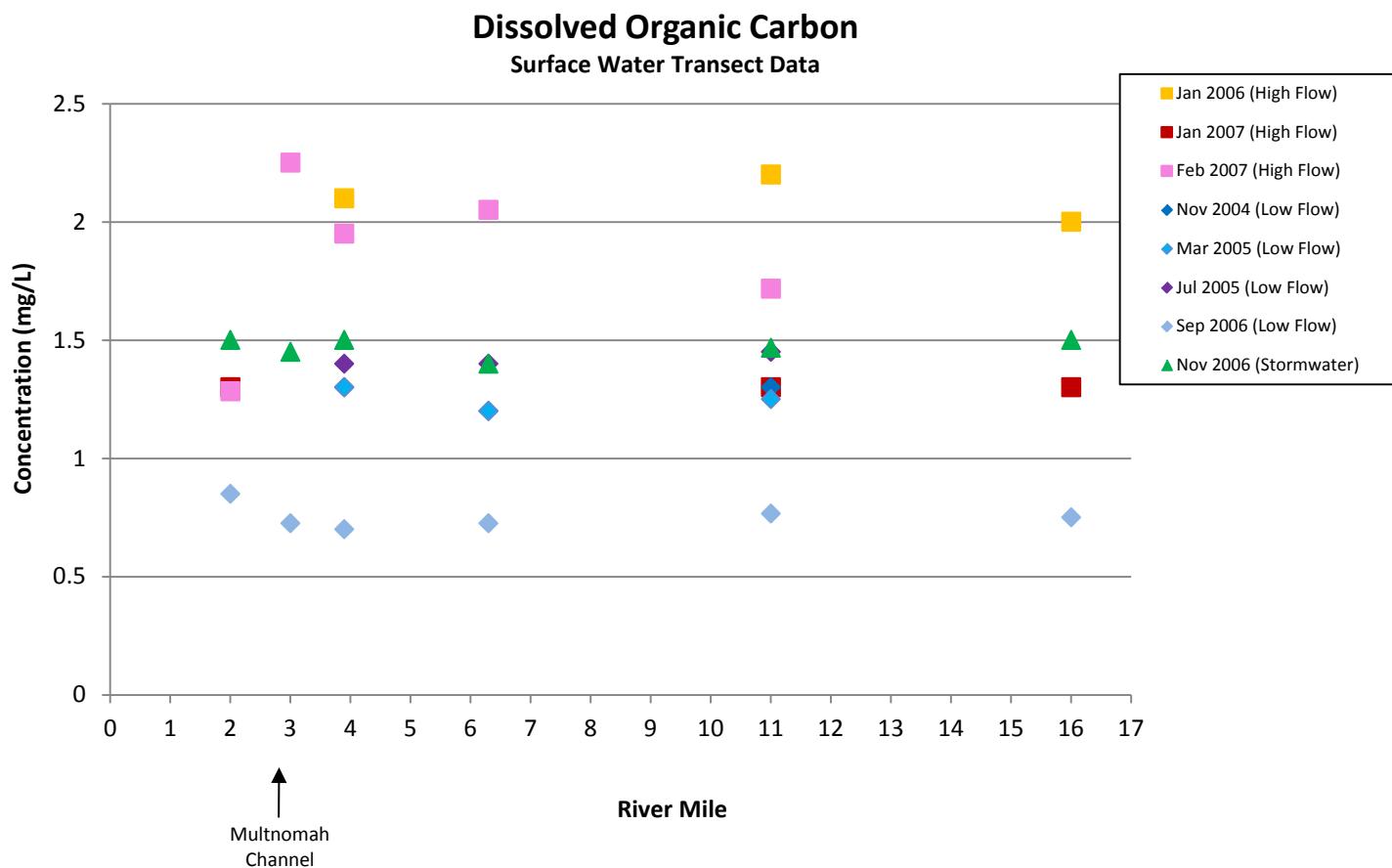


Figure 5.4-8
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plots of Concentration at Surface Water Transect
Stations by Sample Event –Dissolved Organic Carbon

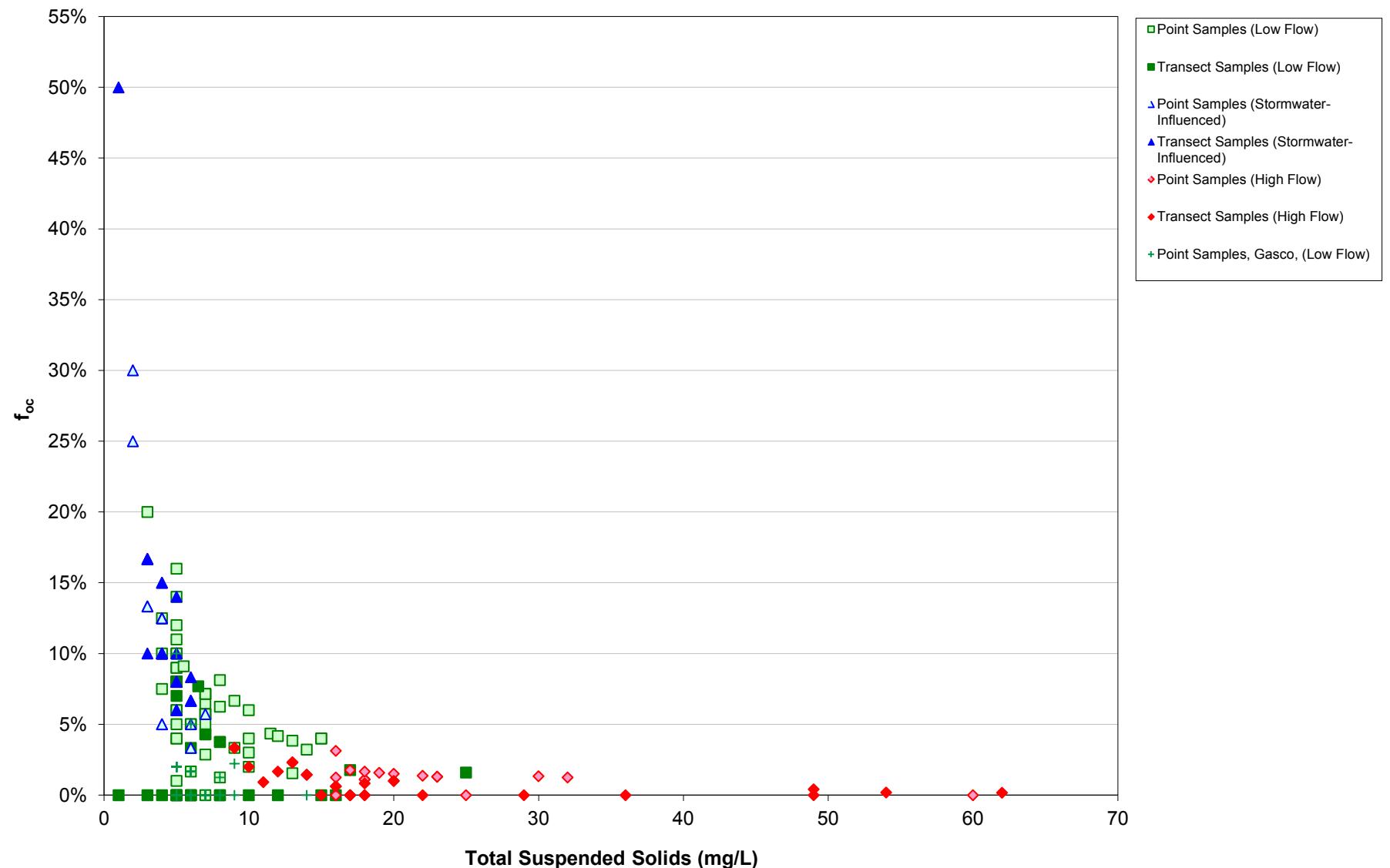


Figure 5.4-9
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Organic Carbon Content vs. Total Suspended Solids
Concentrations in Surface Water, RM 2-16 (Peristaltic)

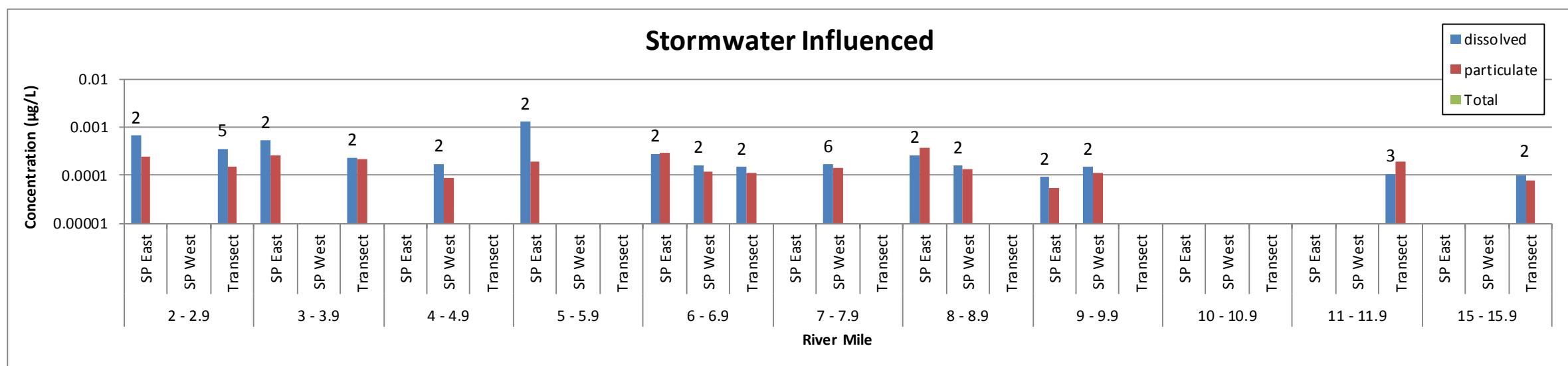
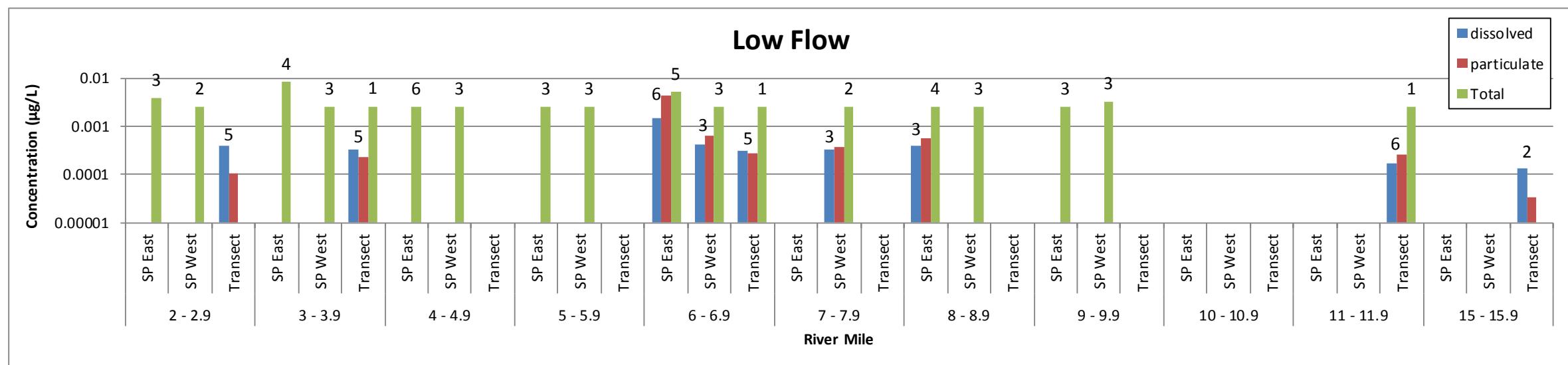
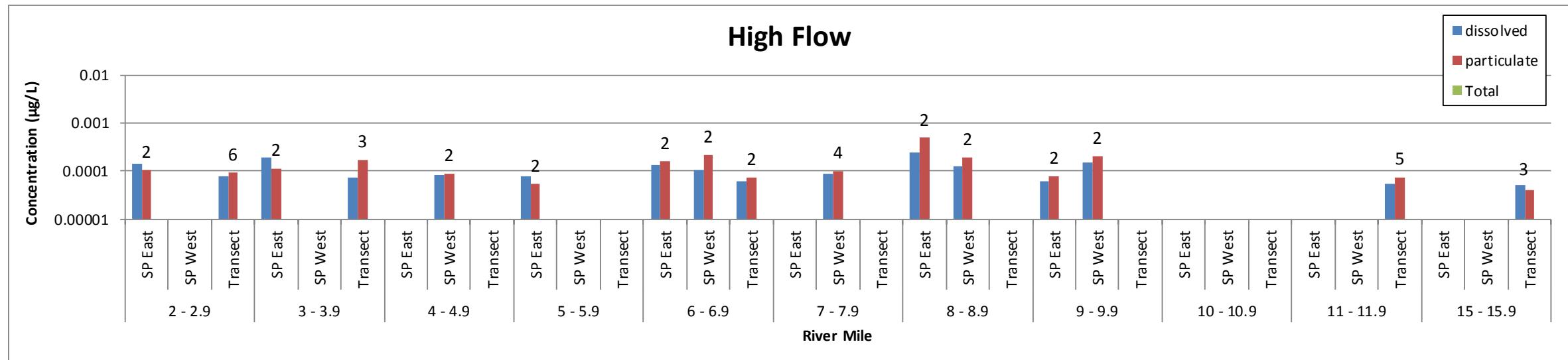


Figure 5.4-10
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Total PCBs Concentrations in Surface Water by Flow Event (RM 2-16)

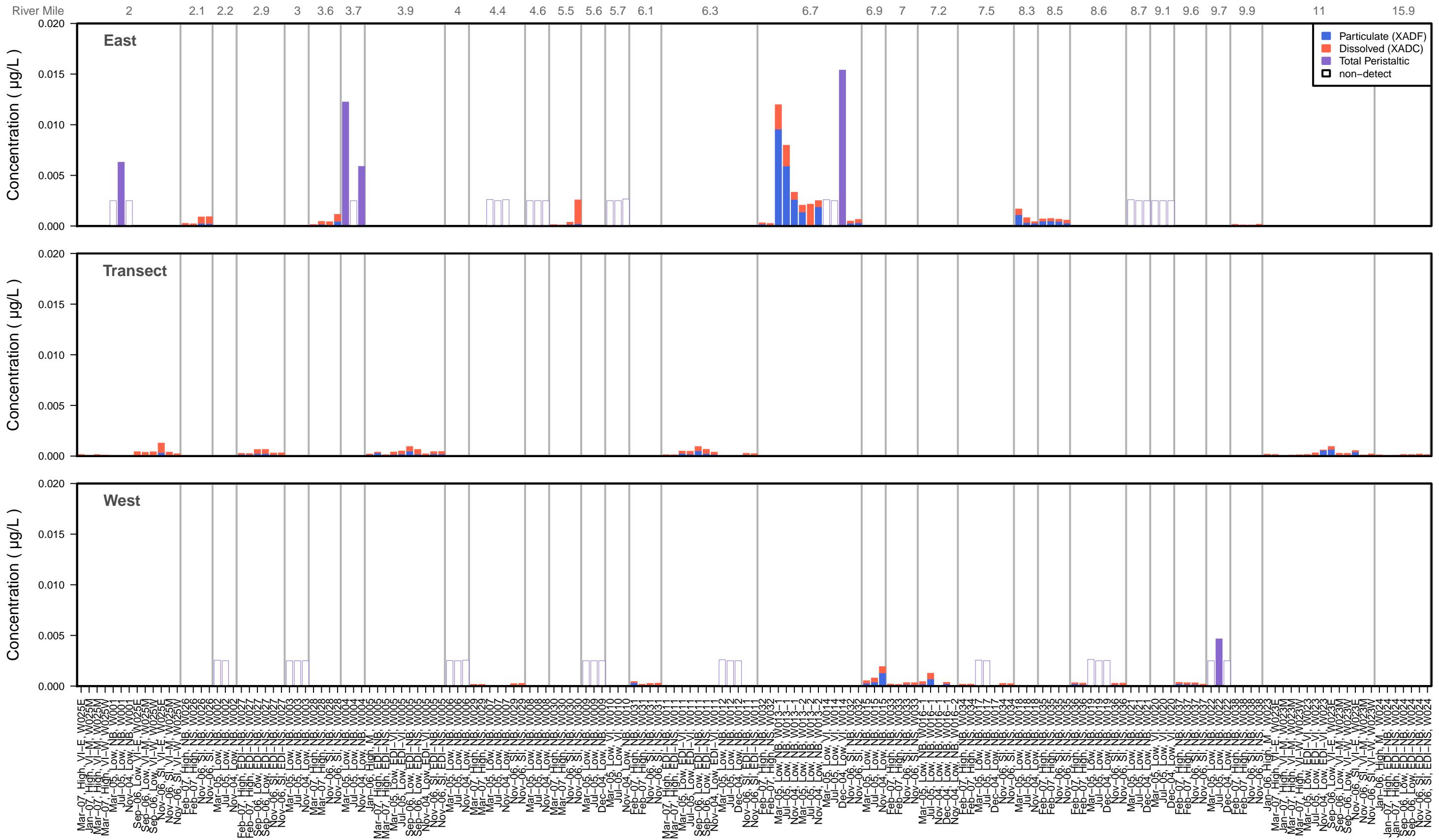


Figure 5.4-11a
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Total PCBs Concentrations in Surface Water, RM 2-16

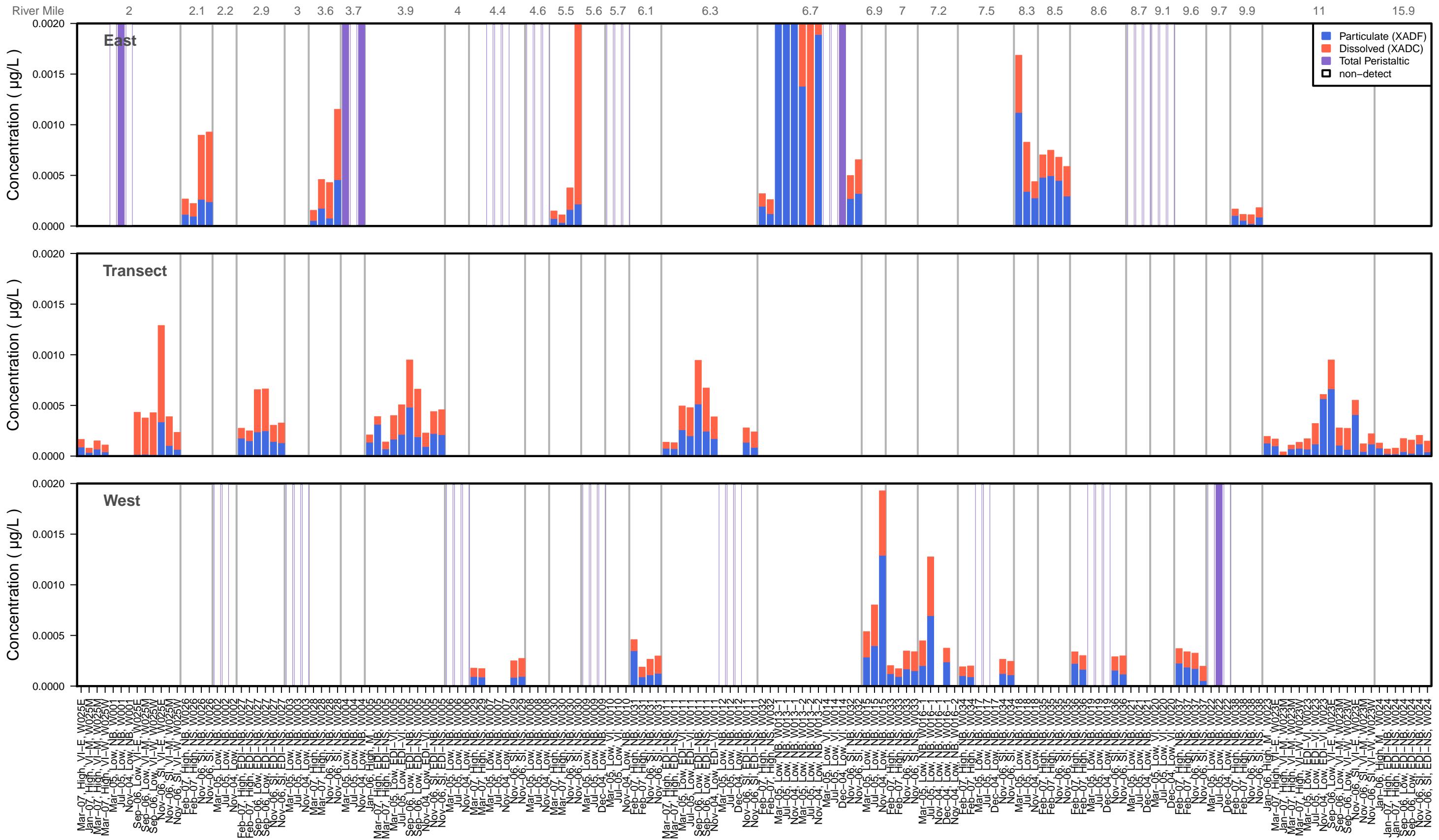


Figure 5.4-11b
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Total PCBs Concentrations in Surface Water, RM 2-16 (Scale Zoomed)

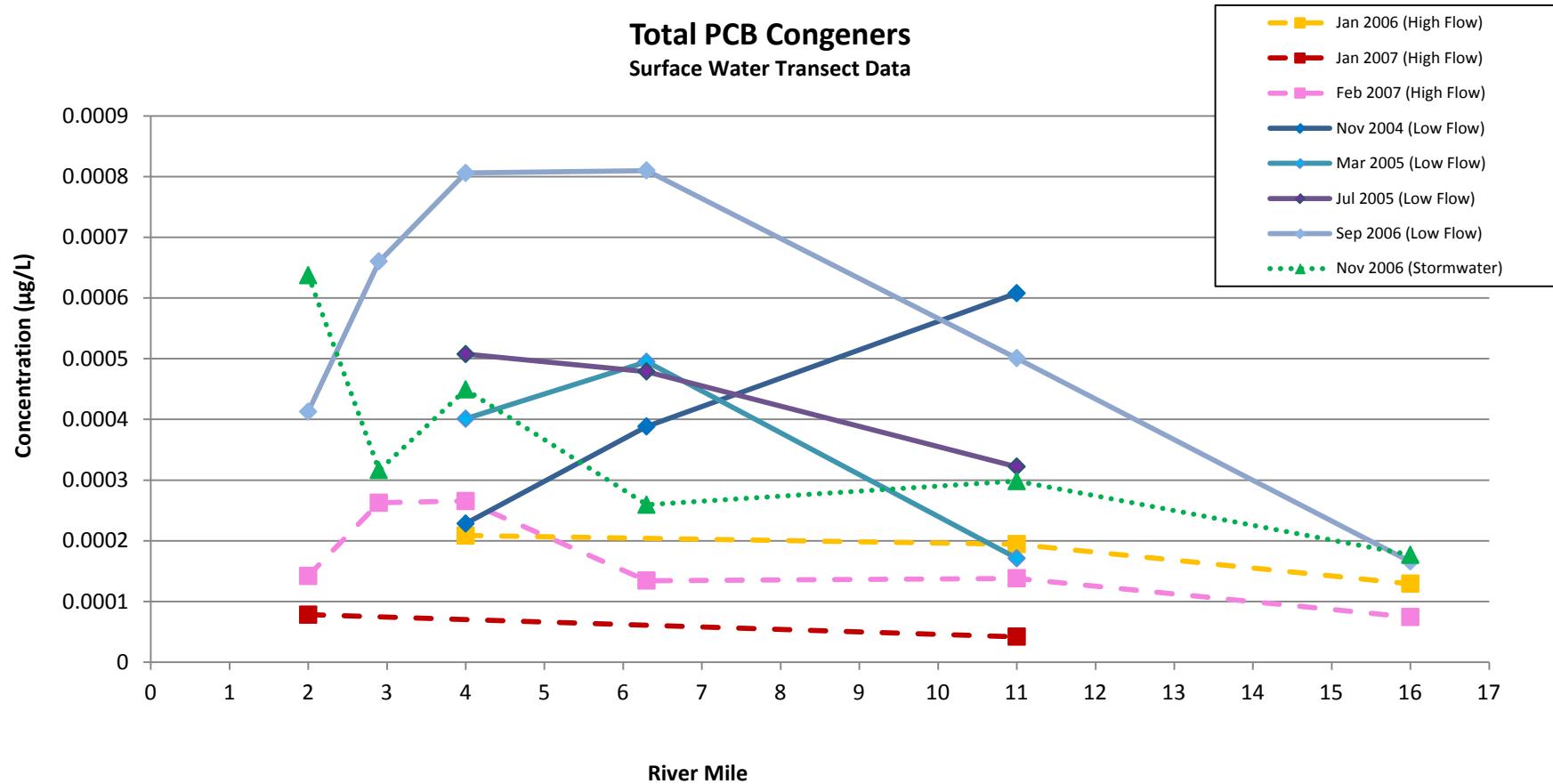


Figure 5.4-12
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Total PCBs Concentrations in Surface Water by River Mile (RM 2–16)

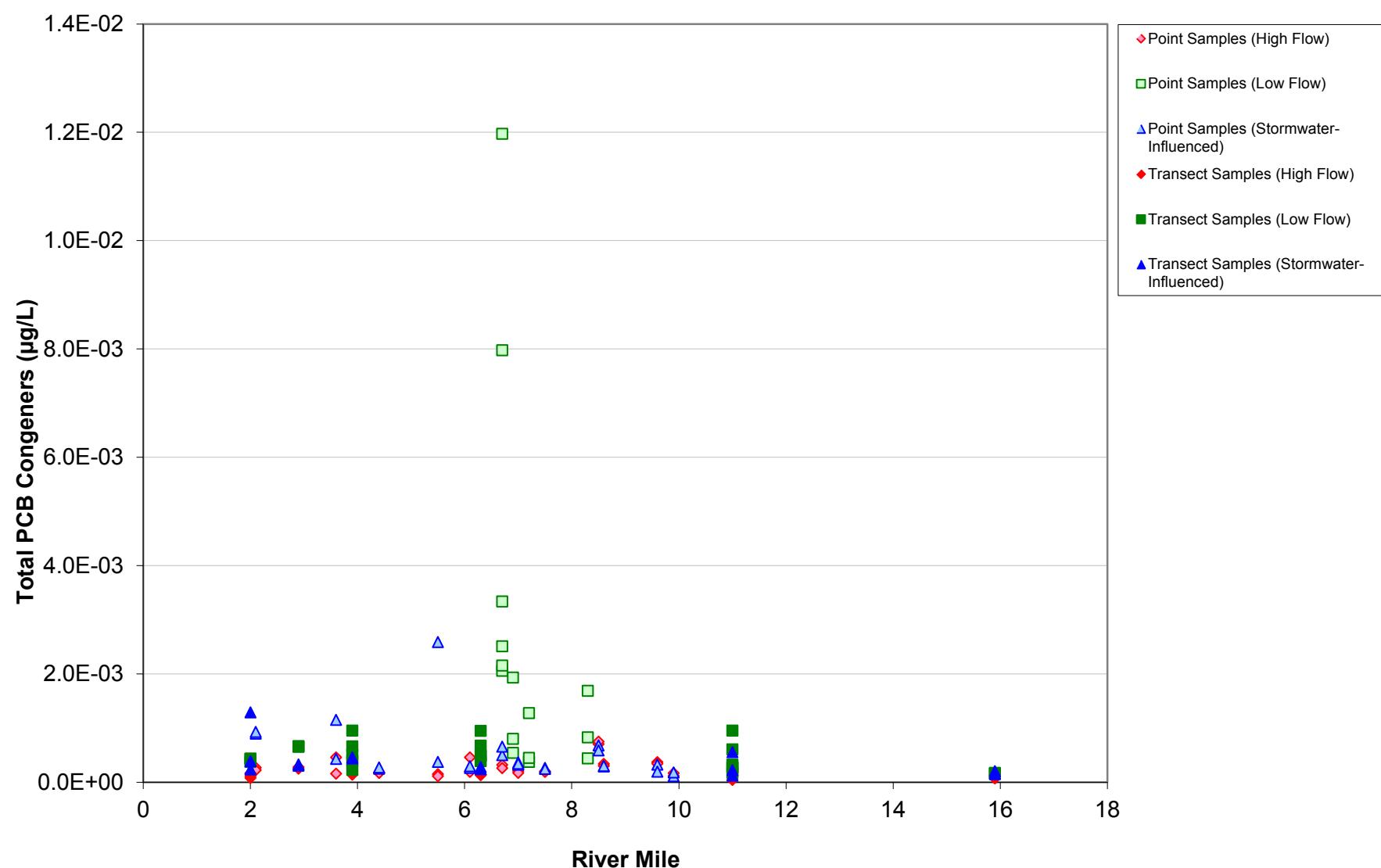


Figure 5.4-13a
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Detected Total PCBs Concentrations in
Surface Water by River Mile (RM 2-16)

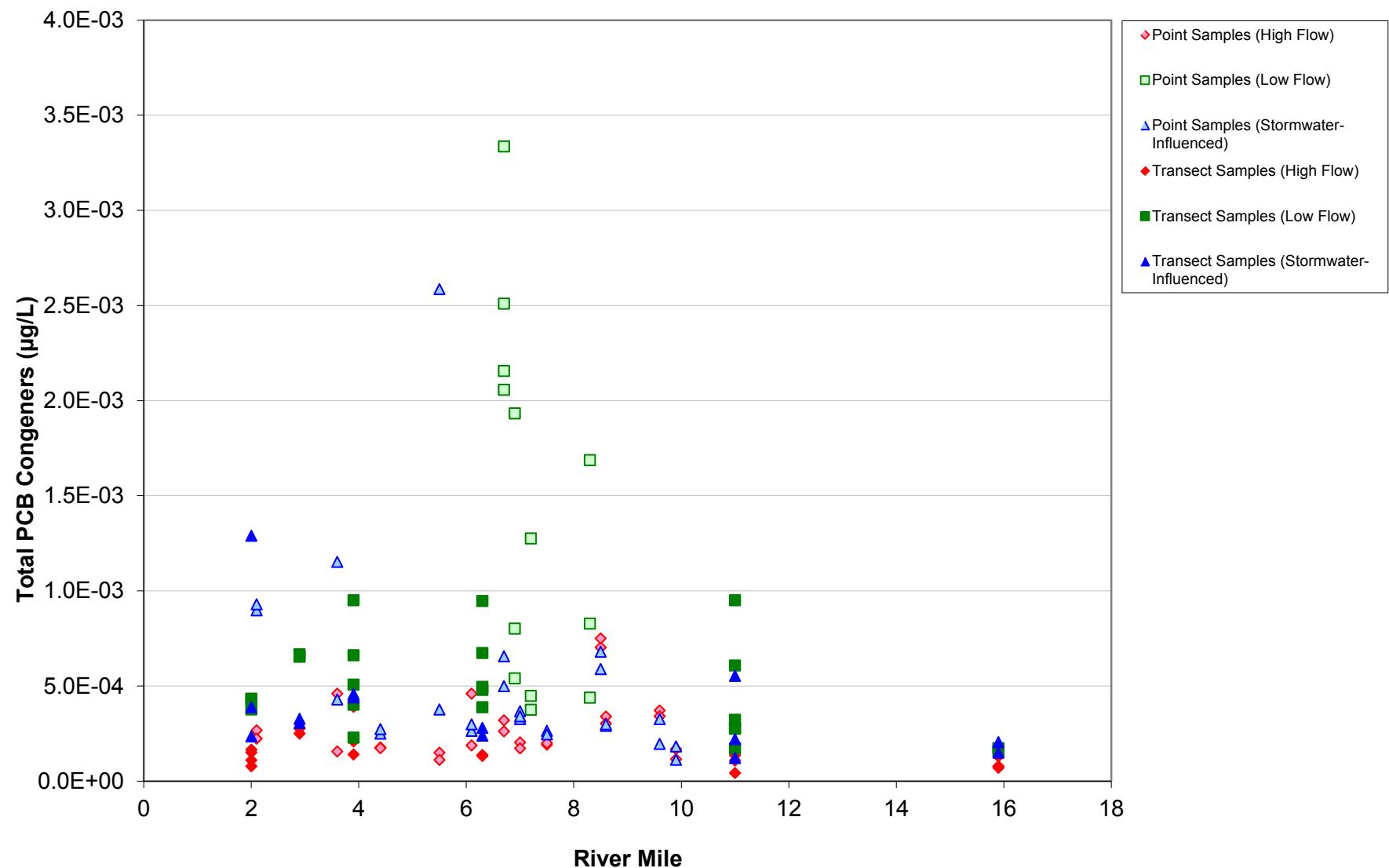


Figure 5.4-13b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Total PCBs Concentrations in Surface Water by River Mile (RM 2-16), Scale Zoom

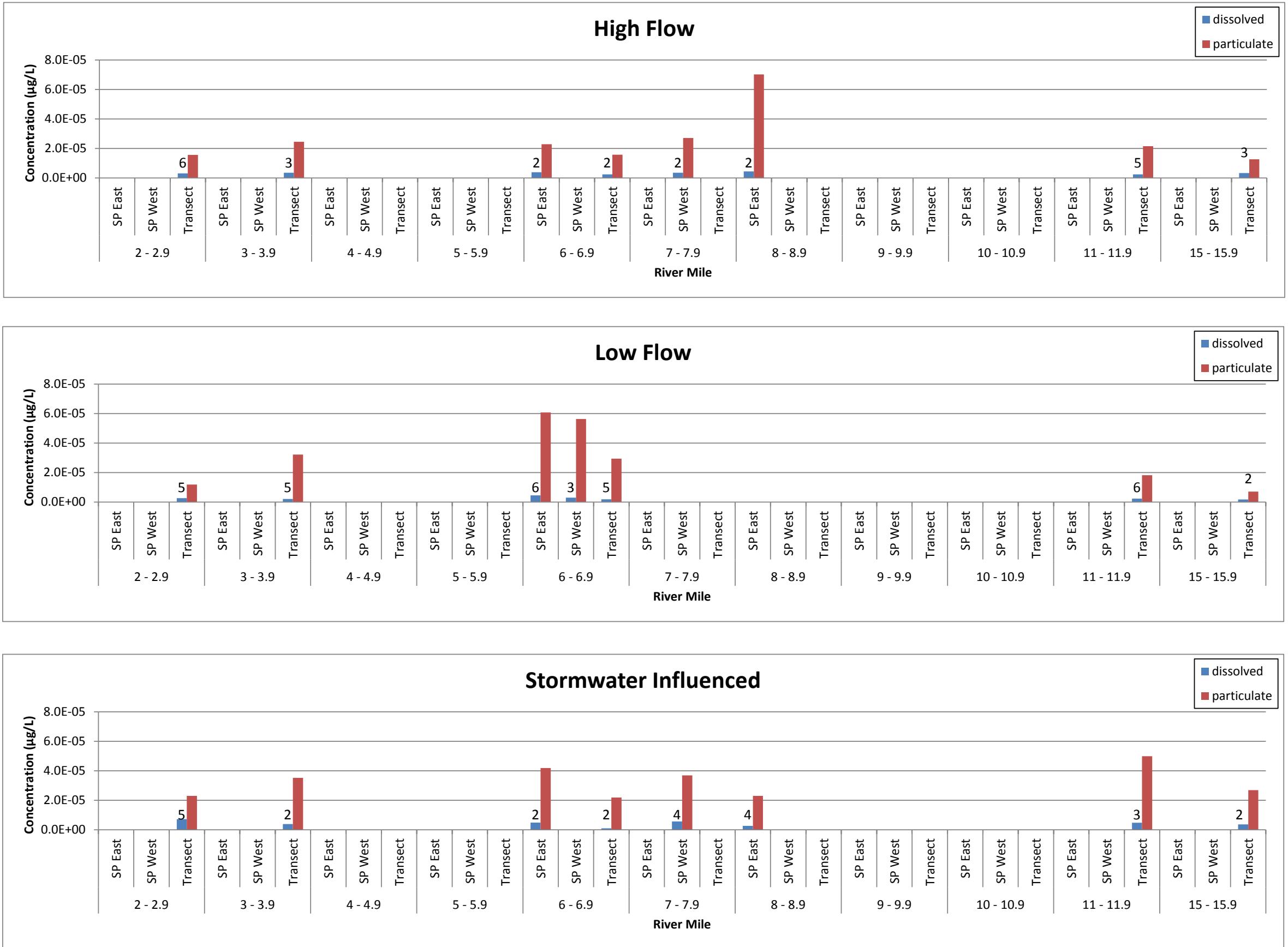


Figure 5.4-14
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Total PCDD/Fs
Concentrations in Surface Water by Flow Event (RM 2-16)

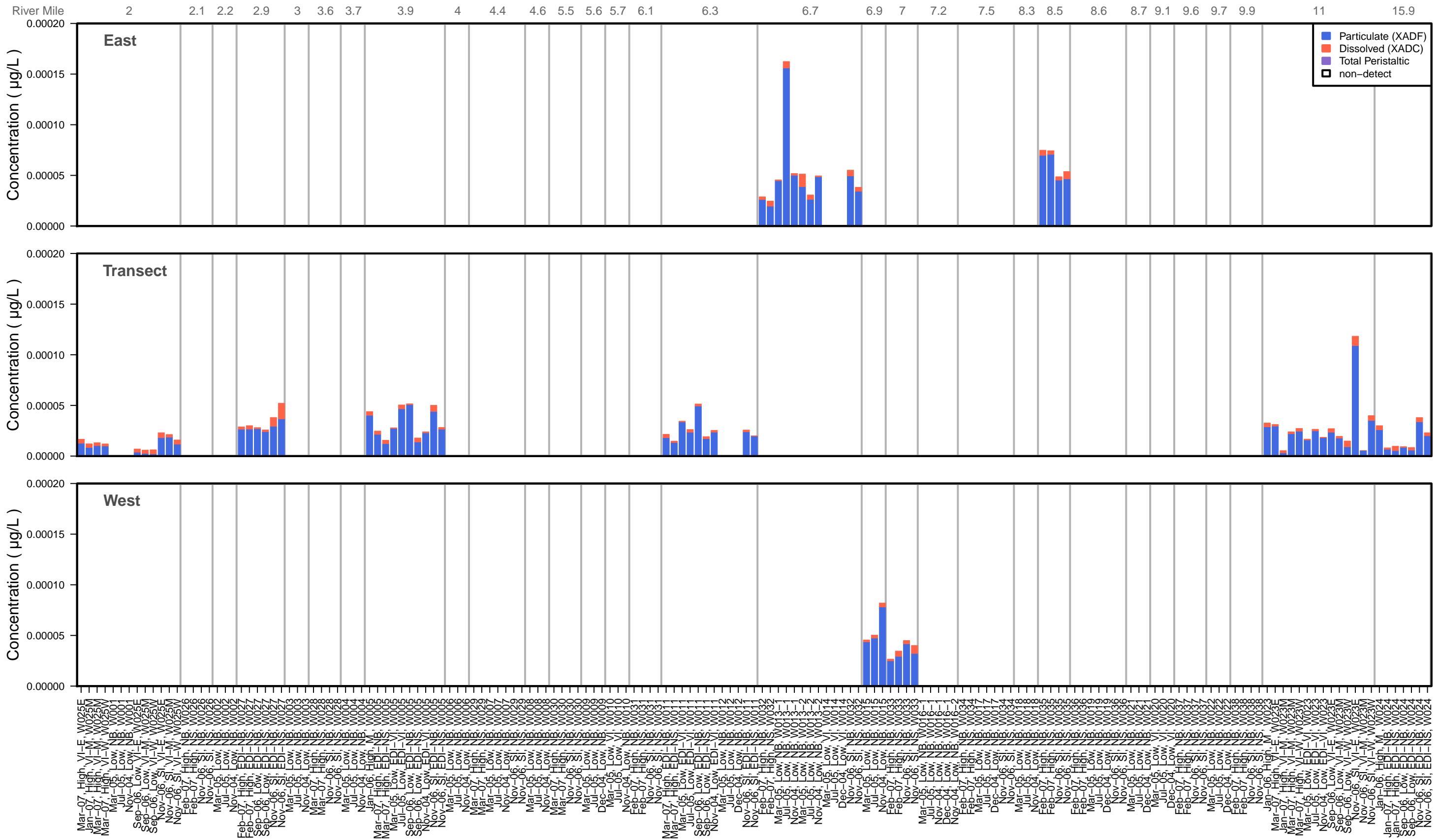


Figure 5.4-15
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Total PCDD/Fs Concentrations in Surface Water, RM 2-16

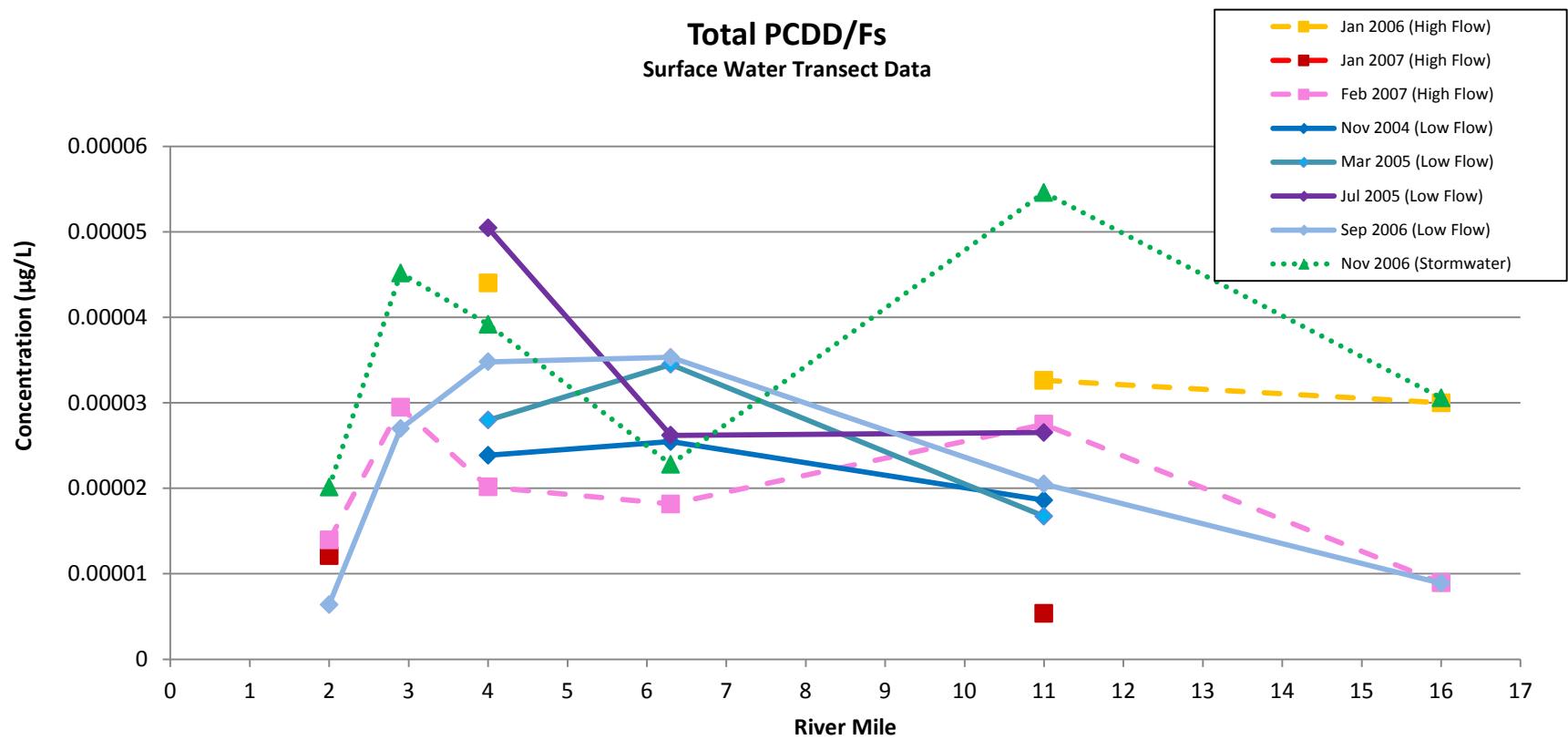


Figure 5.4-16
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Total PCDD/Fs Concentrations in Surface Water by River Mile (RM 2–16)

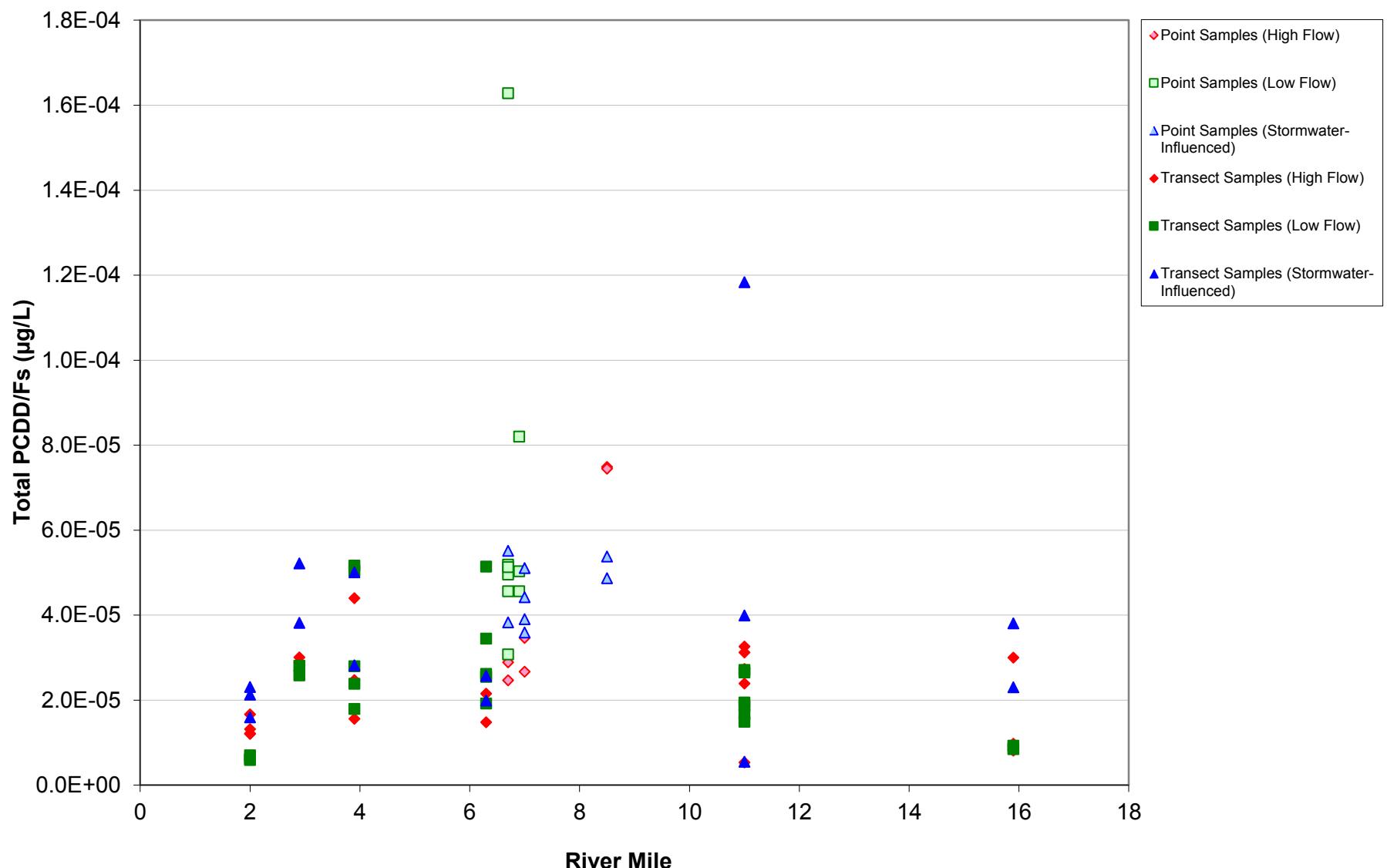


Figure 5.4-17
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Total PCDD/Fs Concentrations in
 Surface Water by River Mile (RM 2-16)

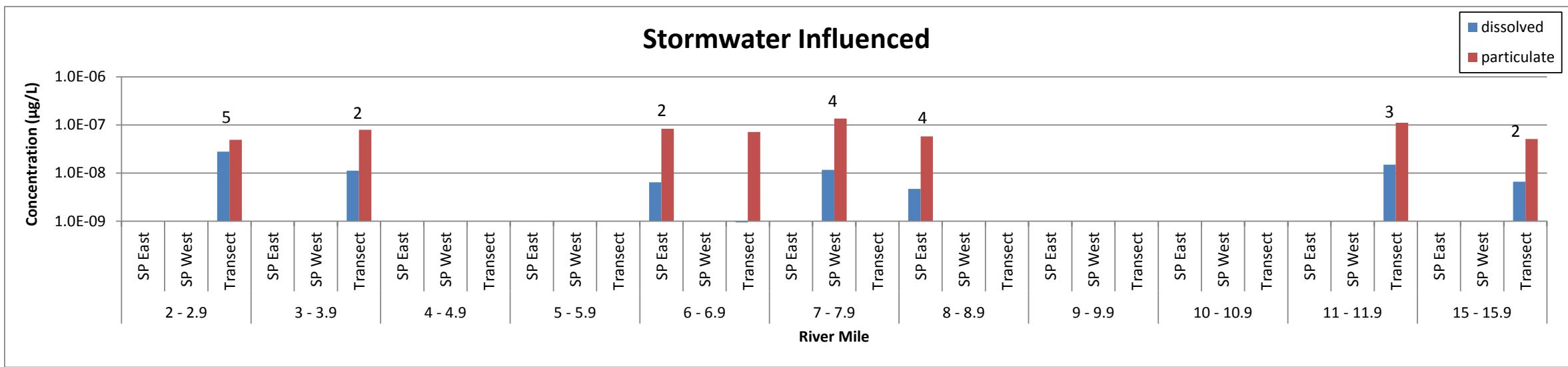
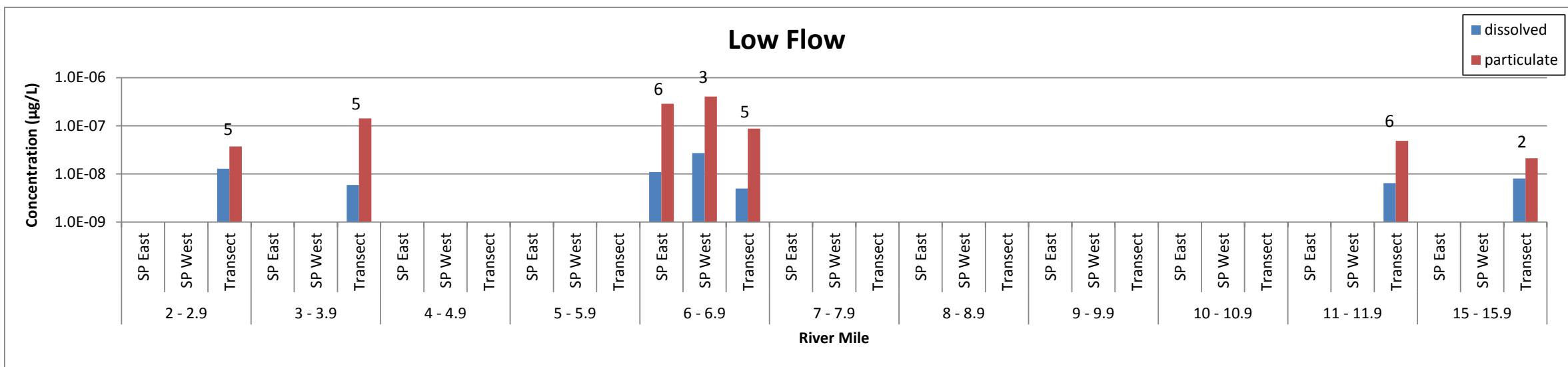
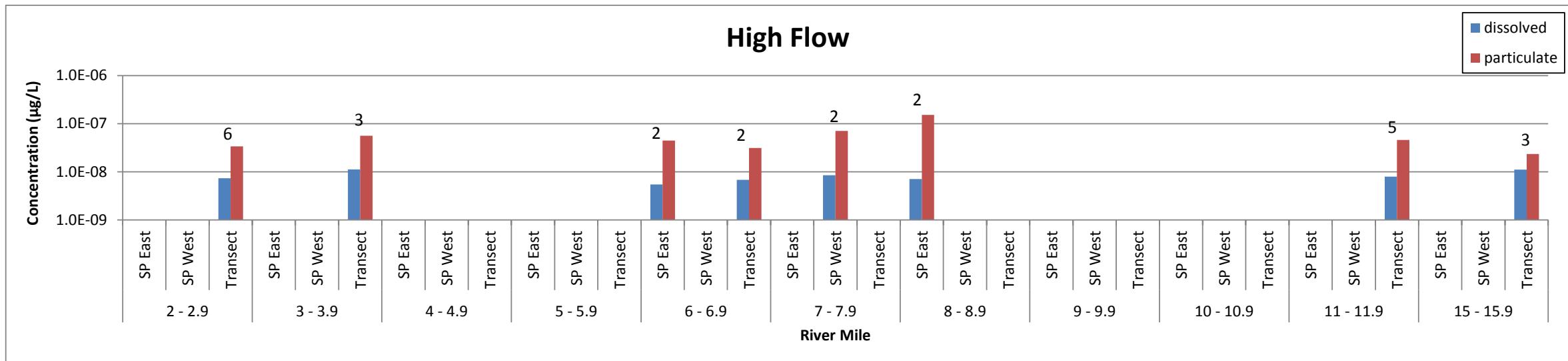


Figure 5.4-18
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point TCDD TEQ
Concentrations in Surface Water by Flow Event (RM 2-16)

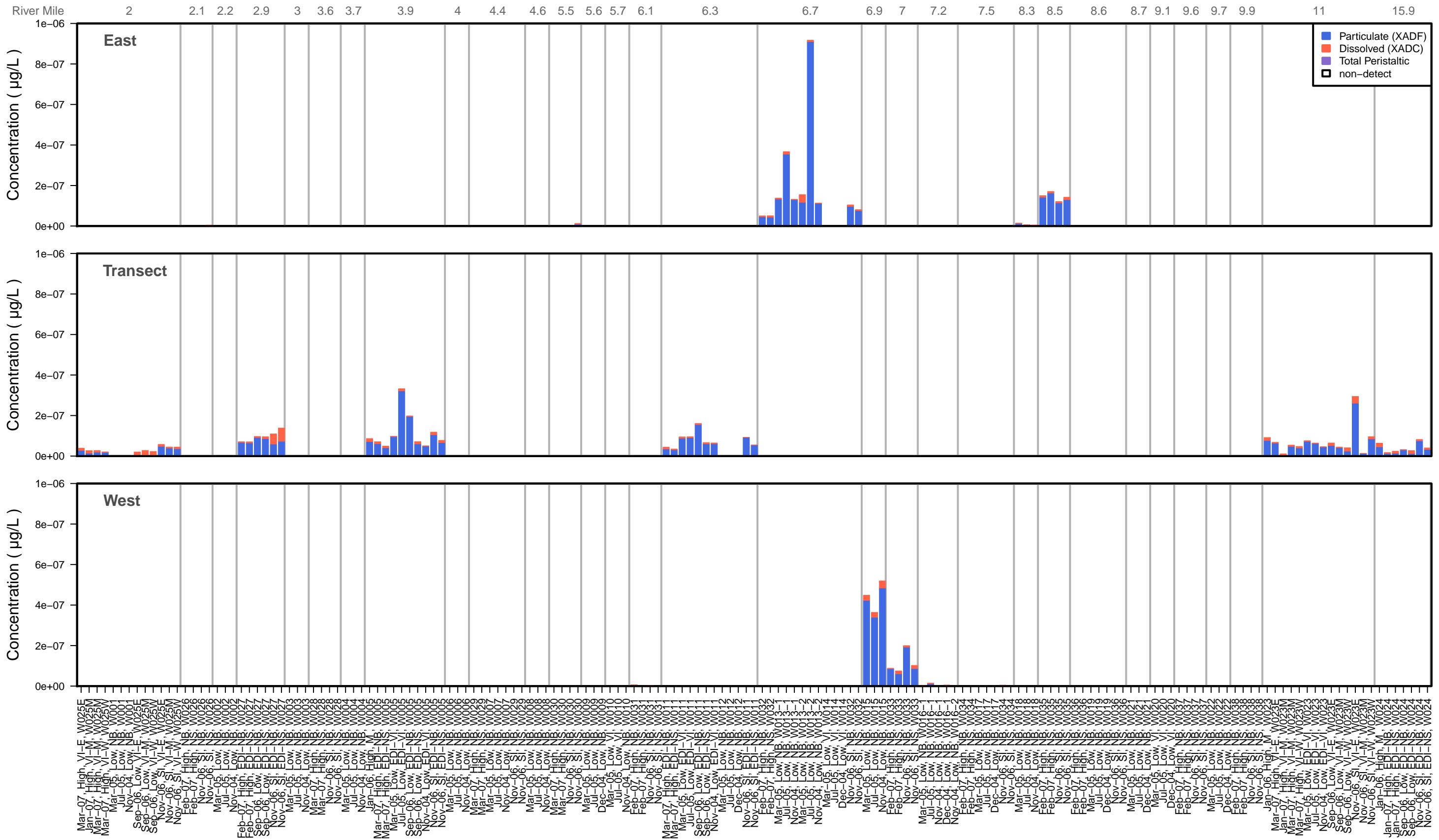


Figure 5.4-19a
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of TCDD TEQ Concentrations in Surface Water, RM 2-16

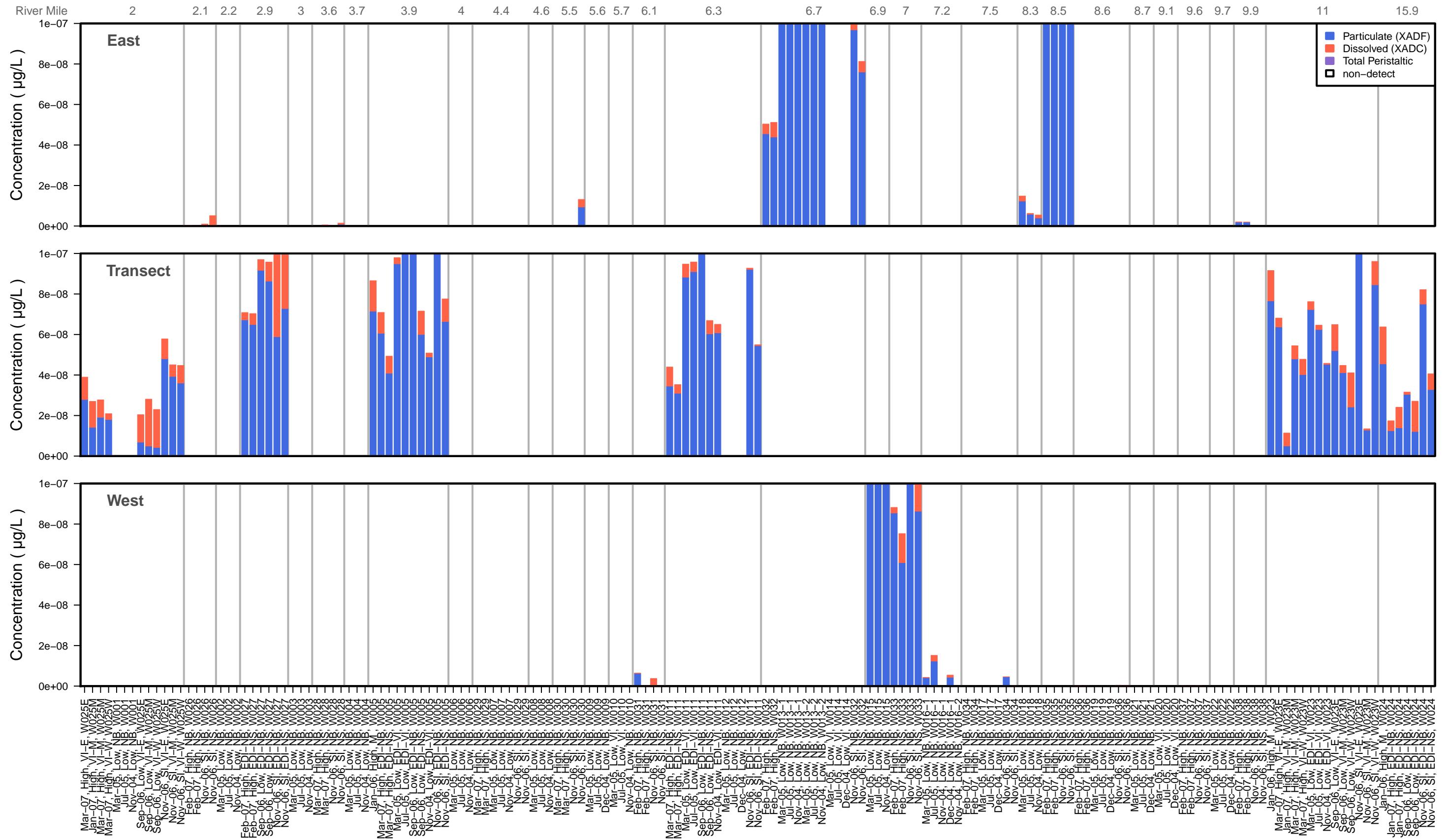


Figure 5.4-19b
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of TCDD TEQ Concentrations in Surface Water, RM 2-16 (Scale Zoomed)

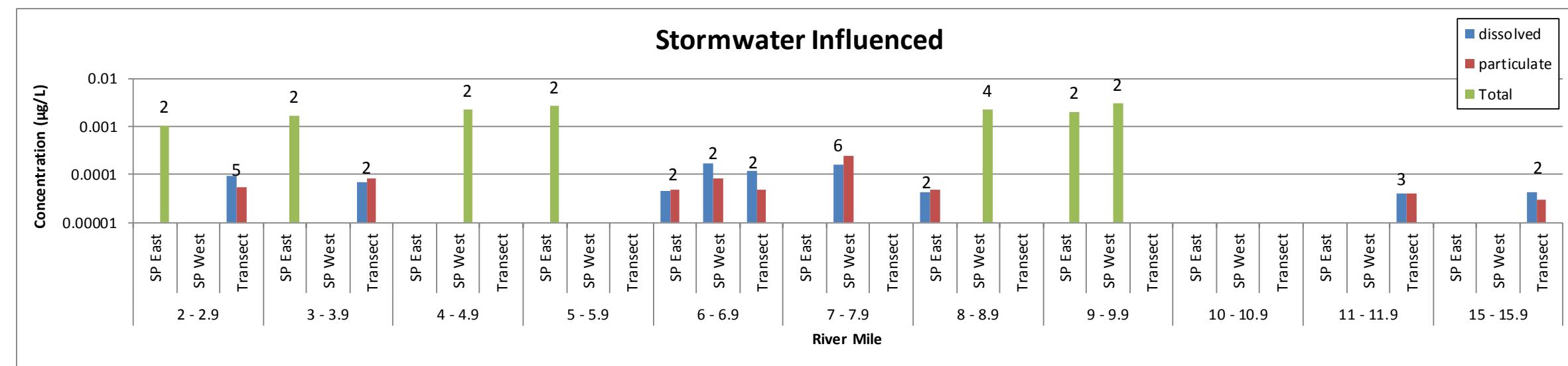
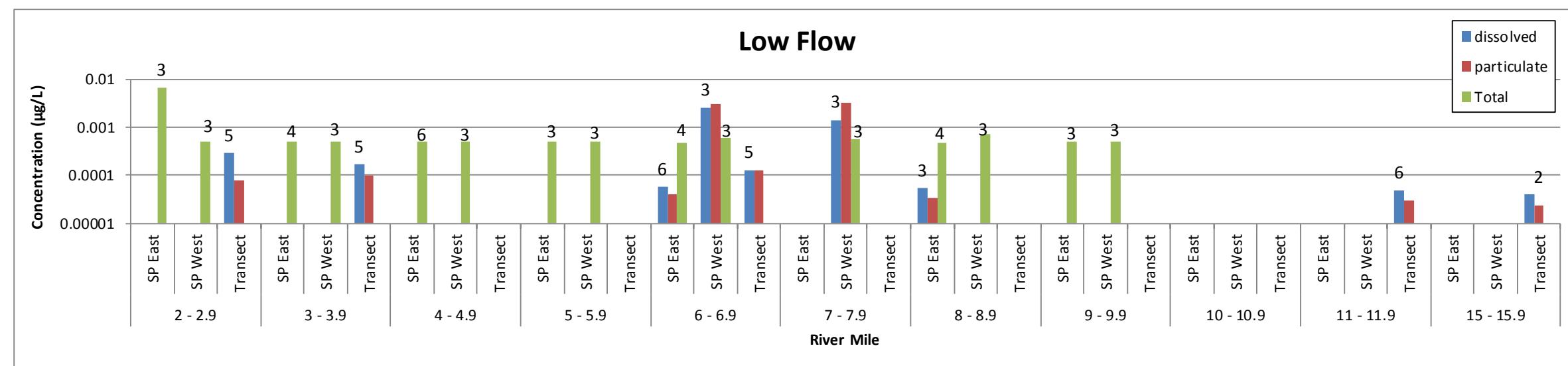
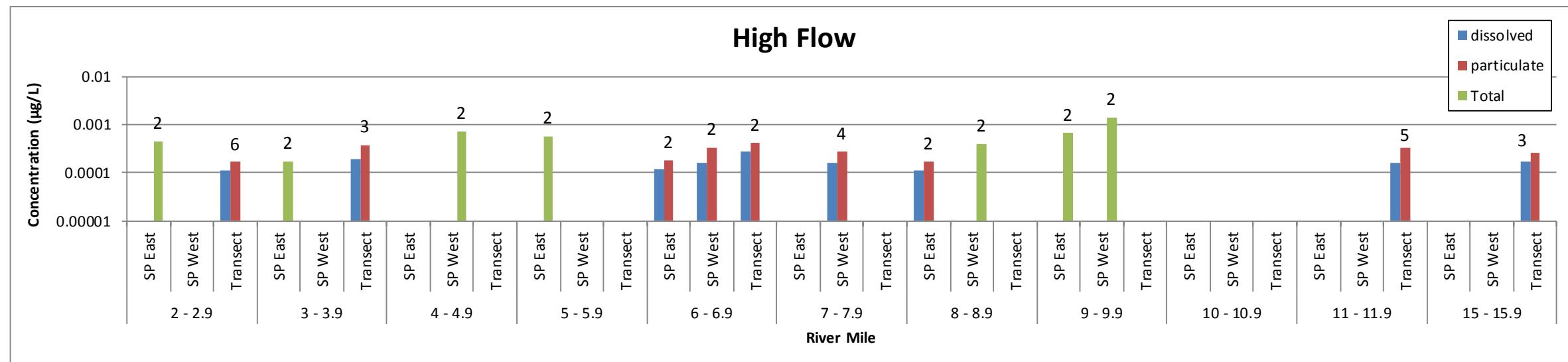


Figure 5.4-20
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Total DDx
Concentrations in Surface Water by Flow Event (RM 2-16)

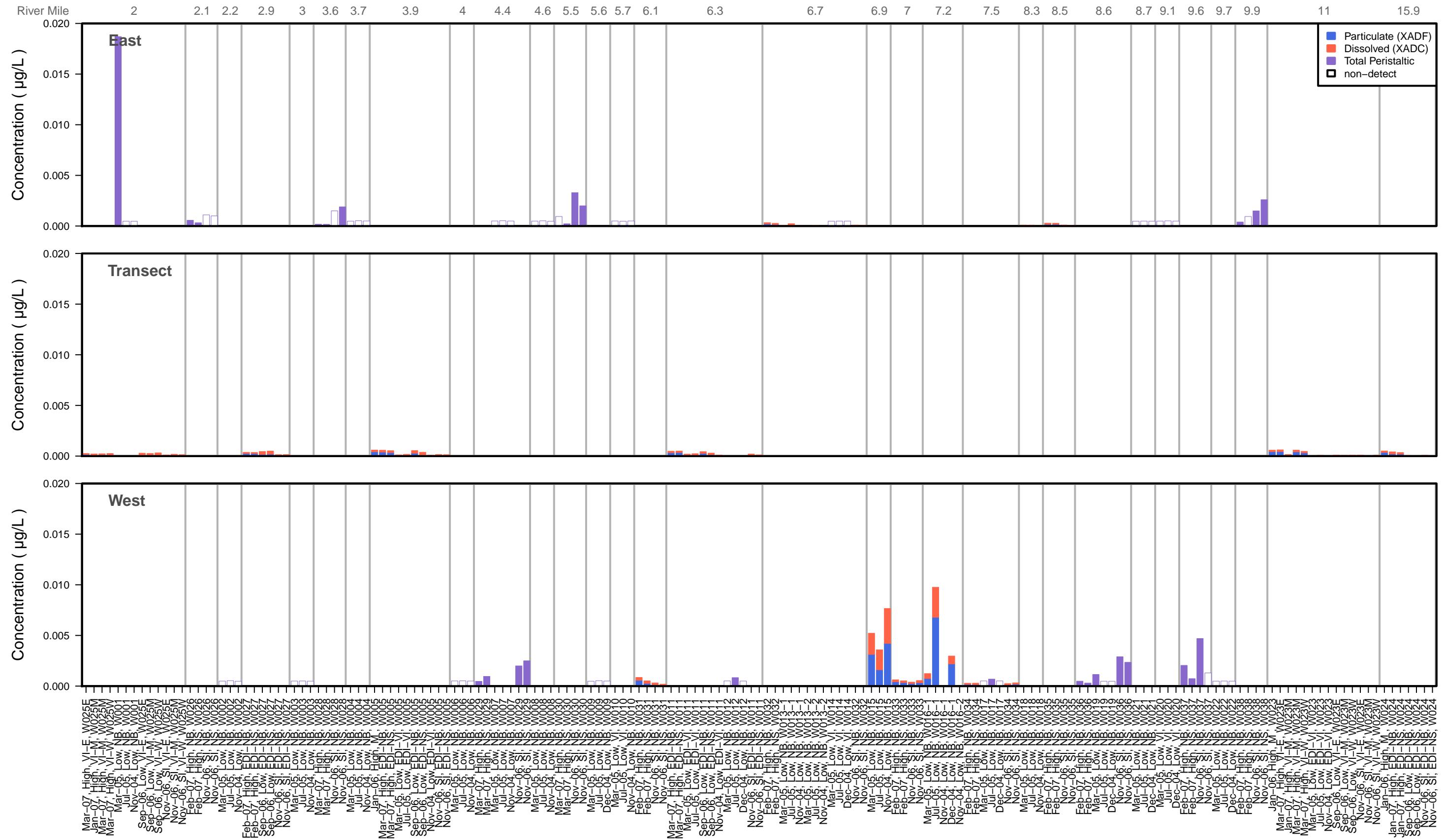


Figure 5.4-21a
Portland Harbor RI/FS
Remedial Investigation Report

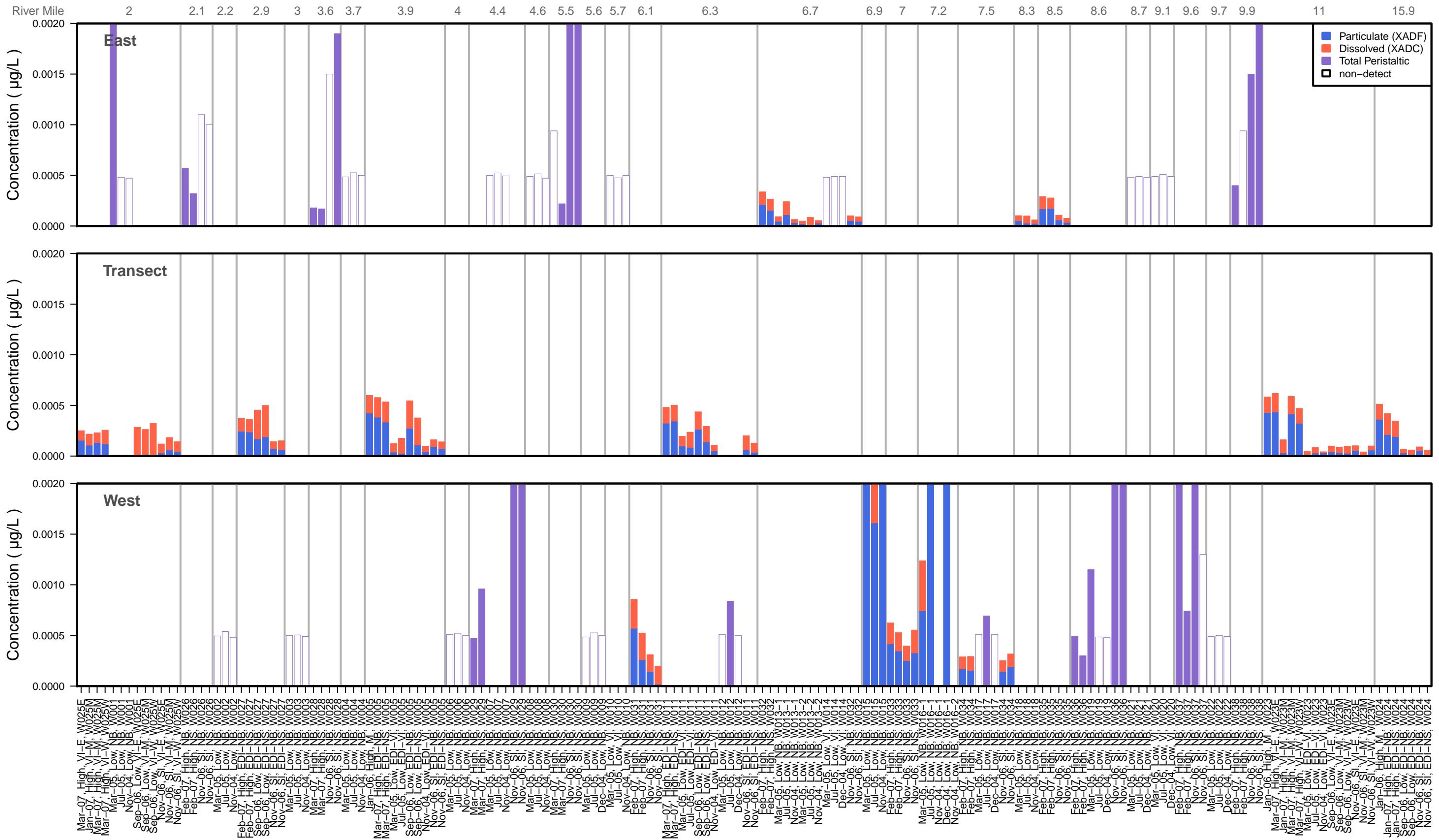


Figure 5.4-21b
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Total DDx Concentrations in Surface Water, RM 2-16 (Scale Zoomed)

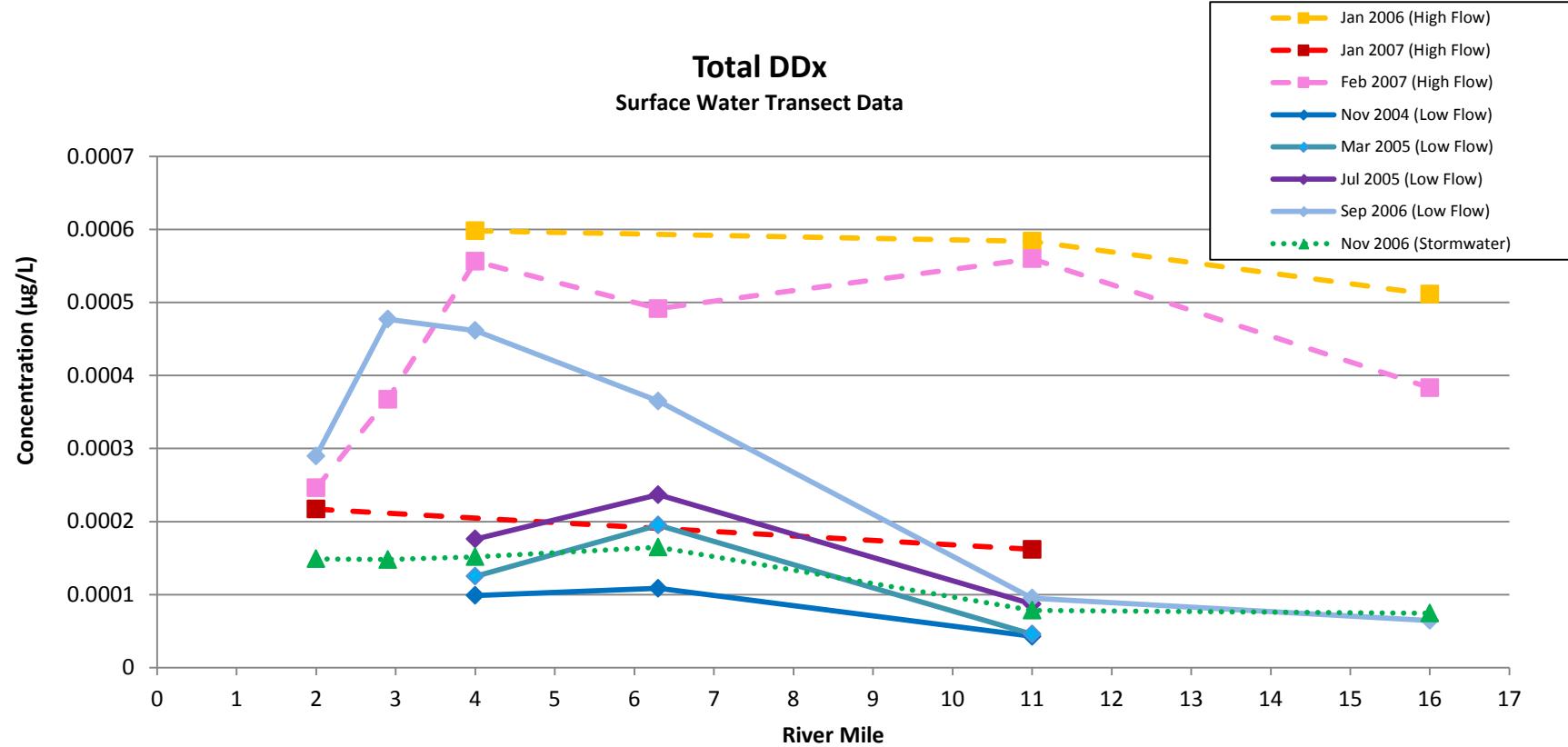


Figure 5.4-22
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Total DDx Concentrations in Surface Water by River Mile (RM 2–16)

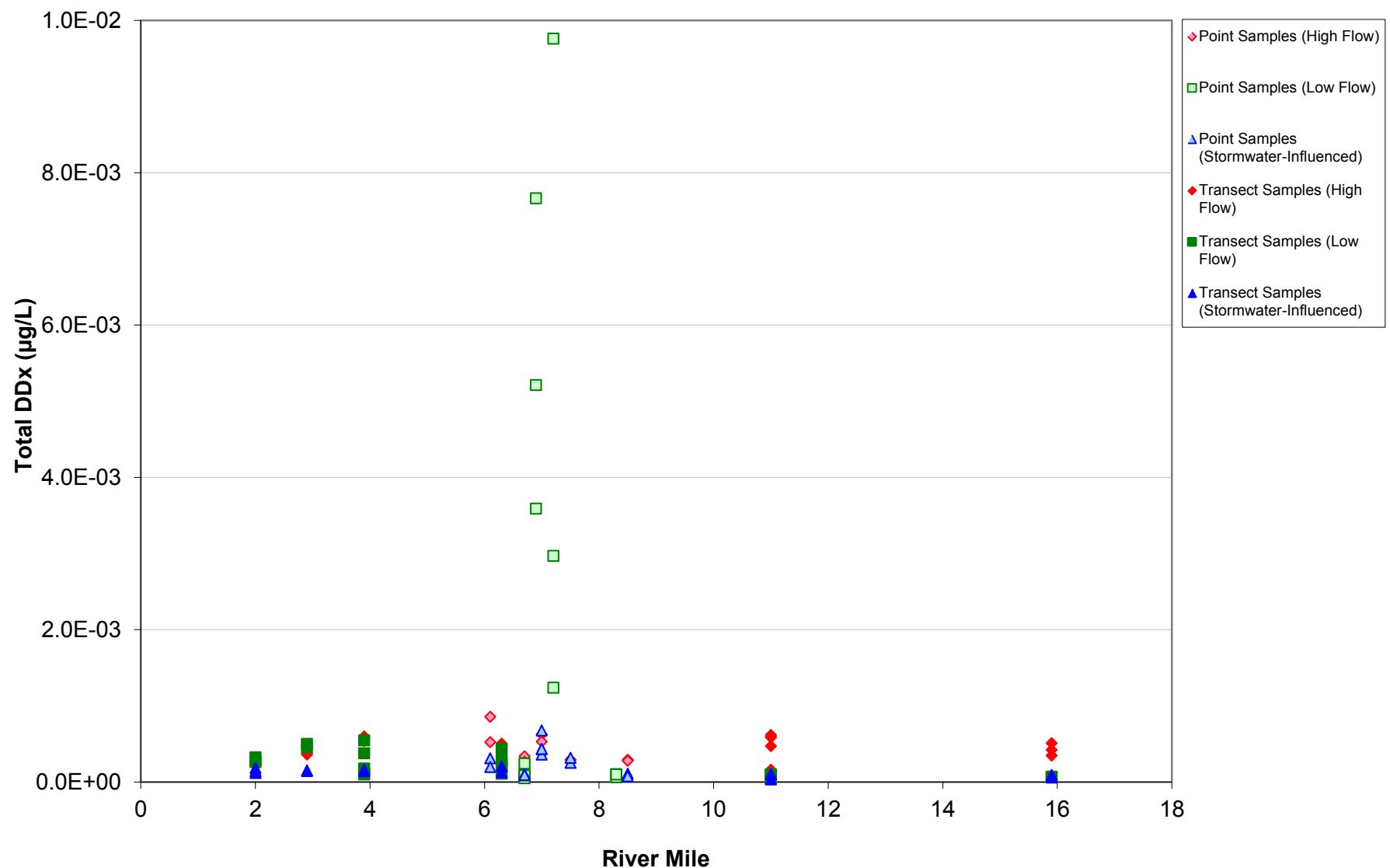


Figure 5.4-23a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Total DDX Concentrations in Surface Water by River Mile (RM 2-16)

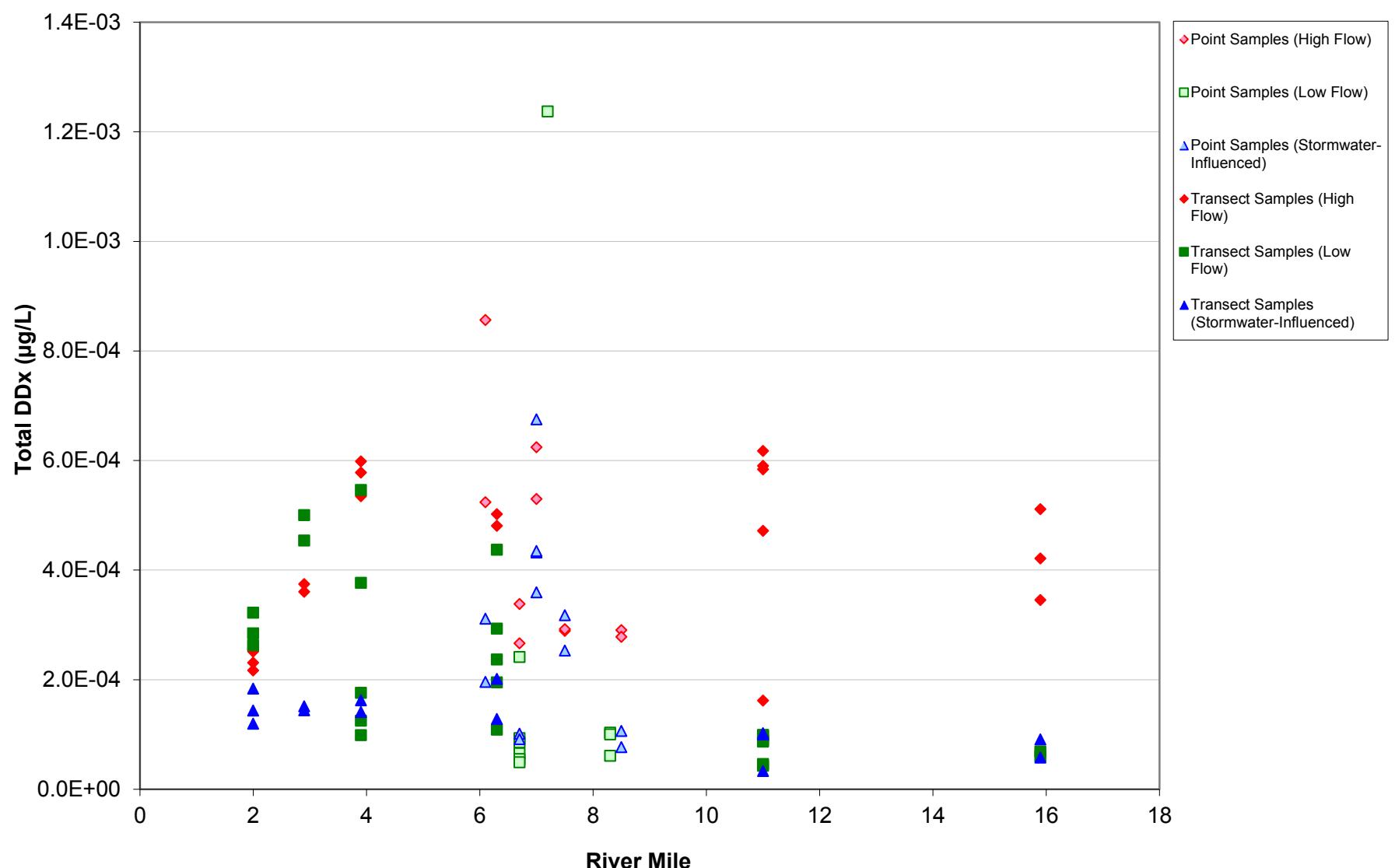


Figure 5.4-23b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Total DDx Concentrations in Surface Water by River Mile (RM 2-16), Scale Zoom

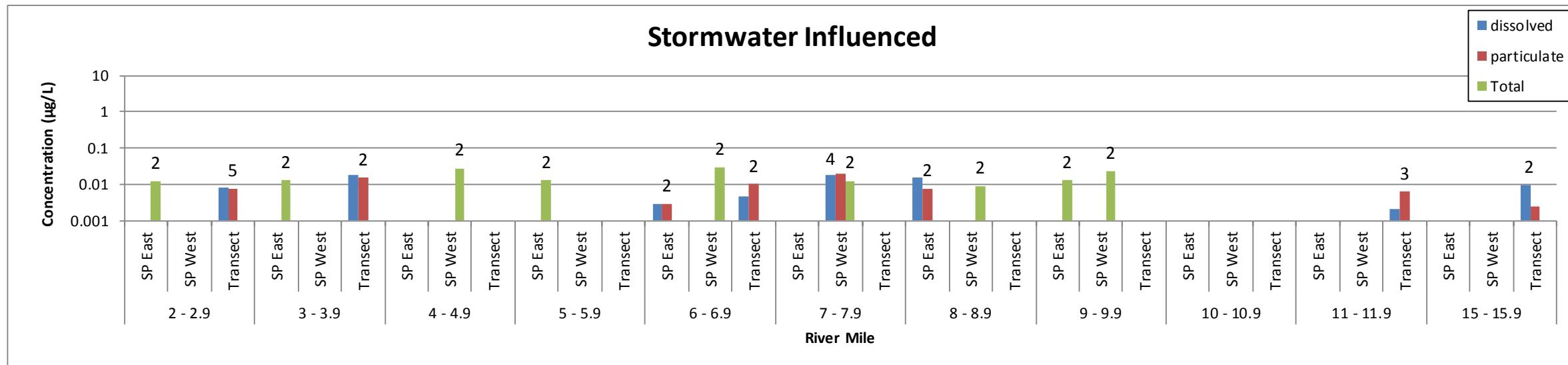
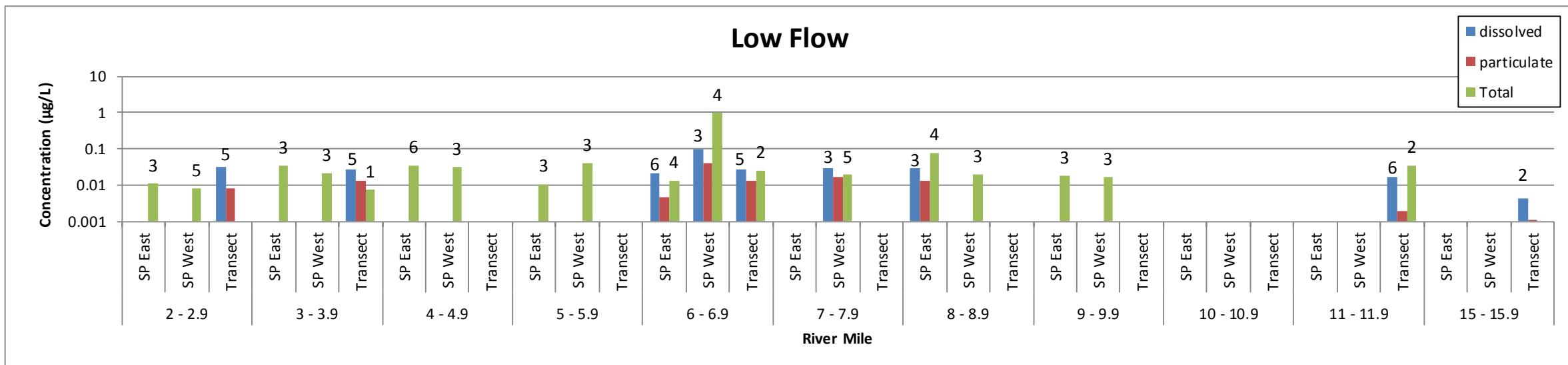
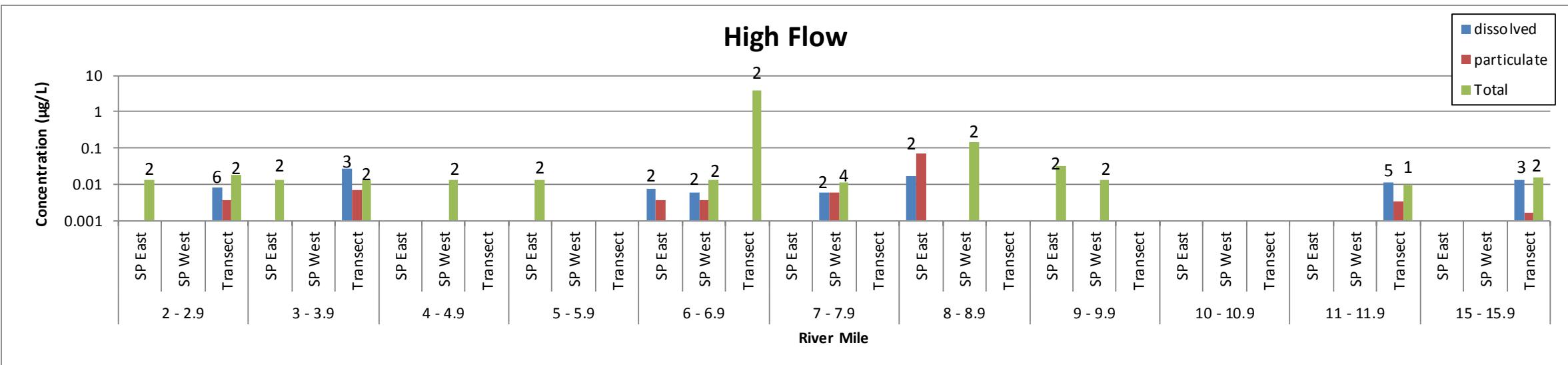


Figure 5.4-24
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Total PAHs
Concentrations in Surface Water by Flow Event (RM 2-16)

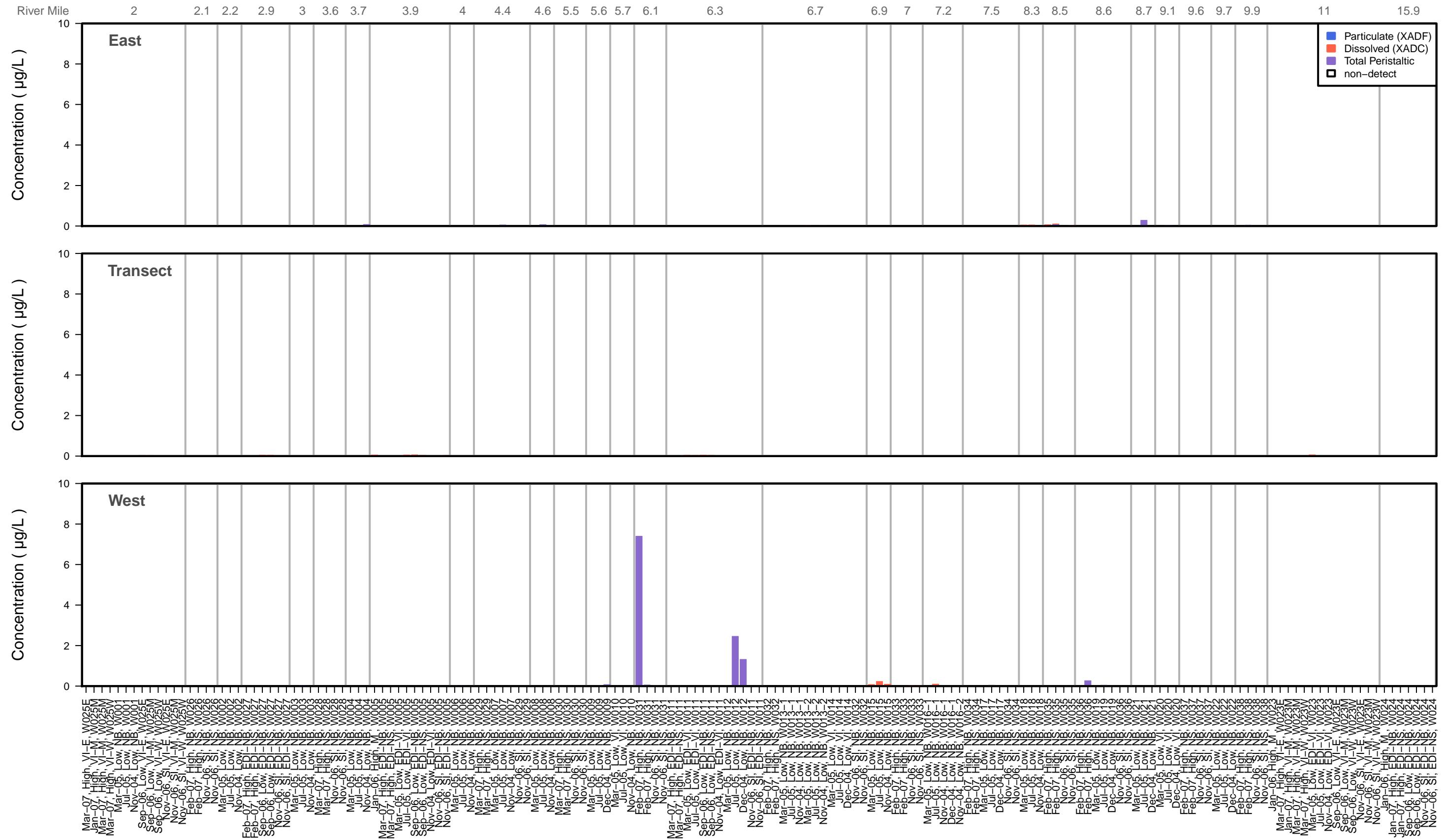


Figure 5.4–25a
Portland Harbor RI/FS
Remedial Investigation Report

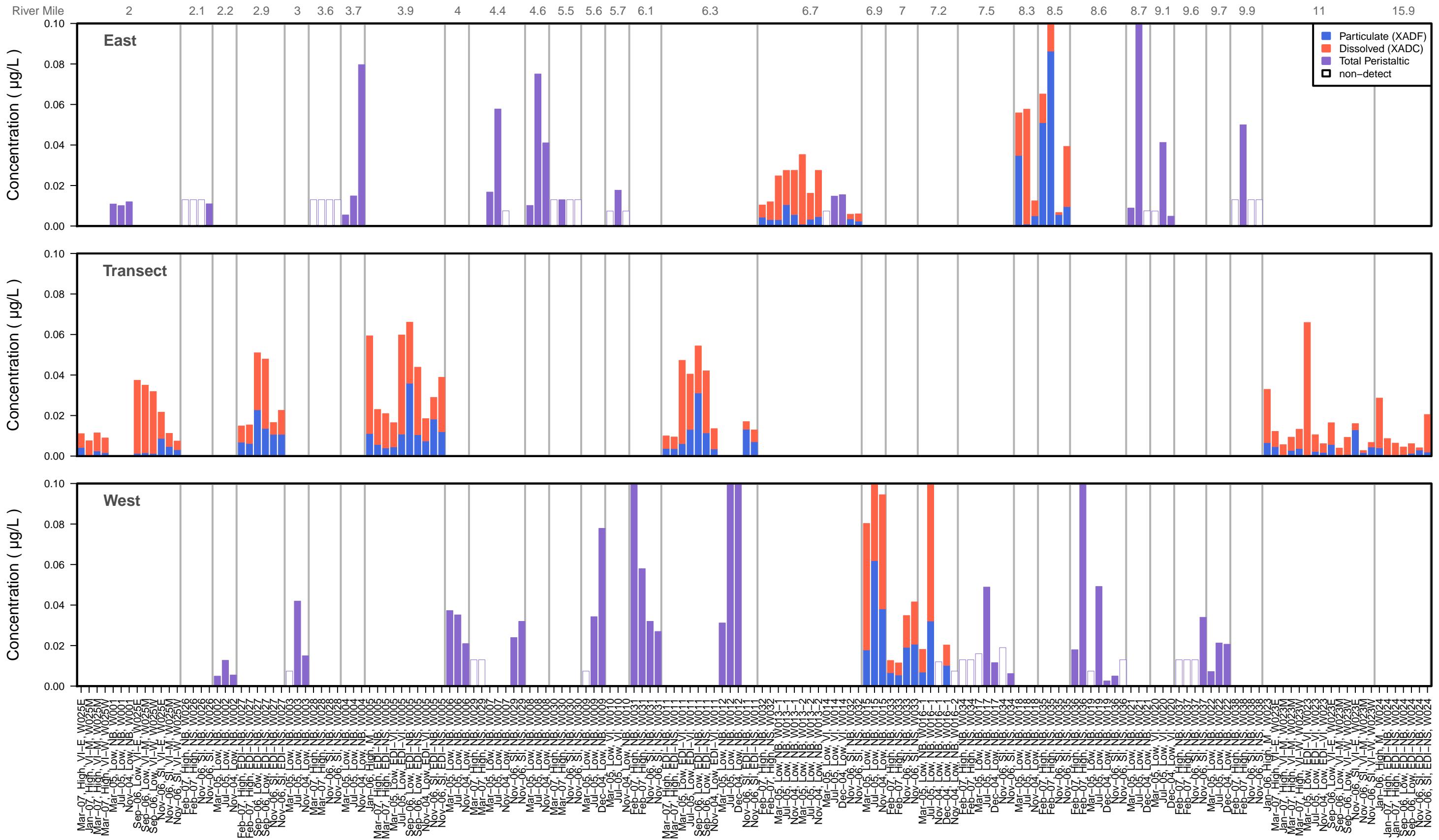


Figure 5.4-25b
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Total PAHs Concentrations in Surface Water, RM 2-16 (Scale Zoomed)

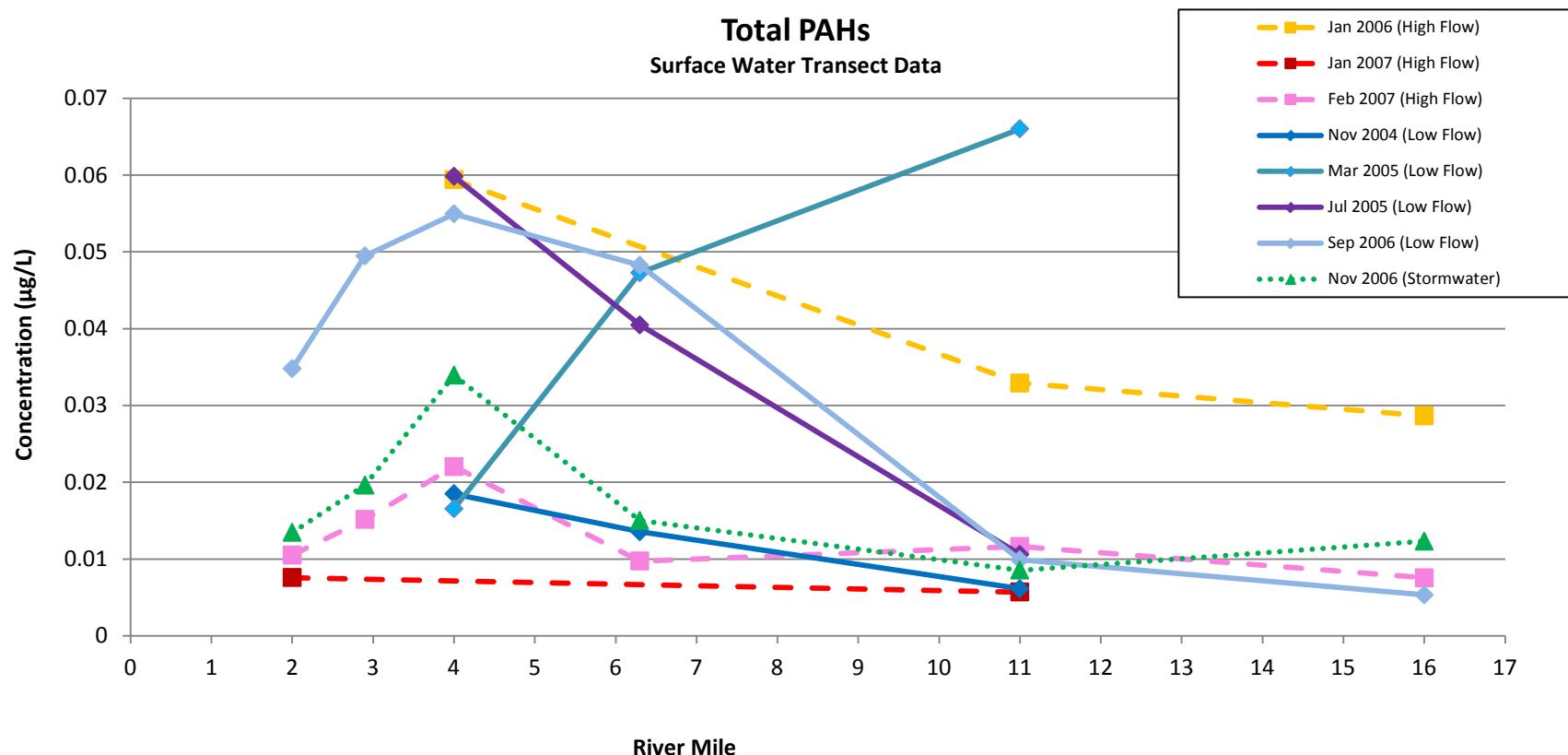


Figure 5.4-26
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Total PAHs Concentrations in Surface Water by River Mile (RM 2–16)

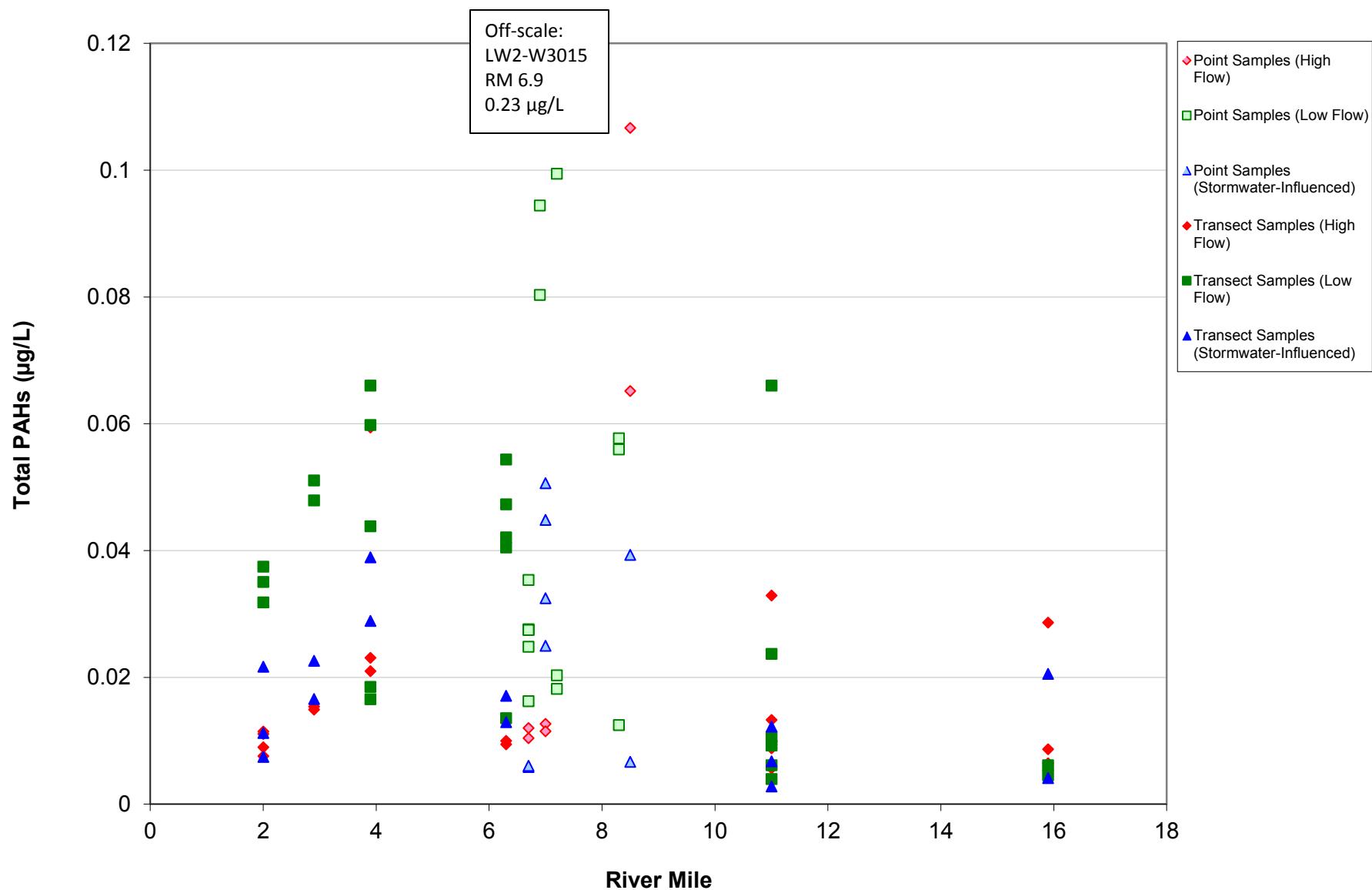


Figure 5.4-27
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Detected Total PAHs Concentrations in
Surface Water by River Mile (RM 2-16)

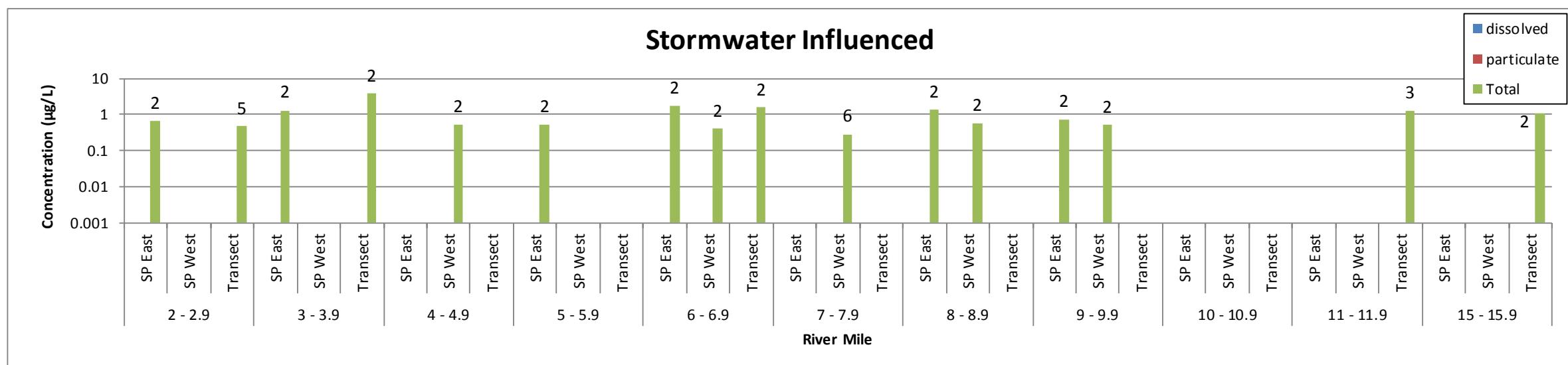
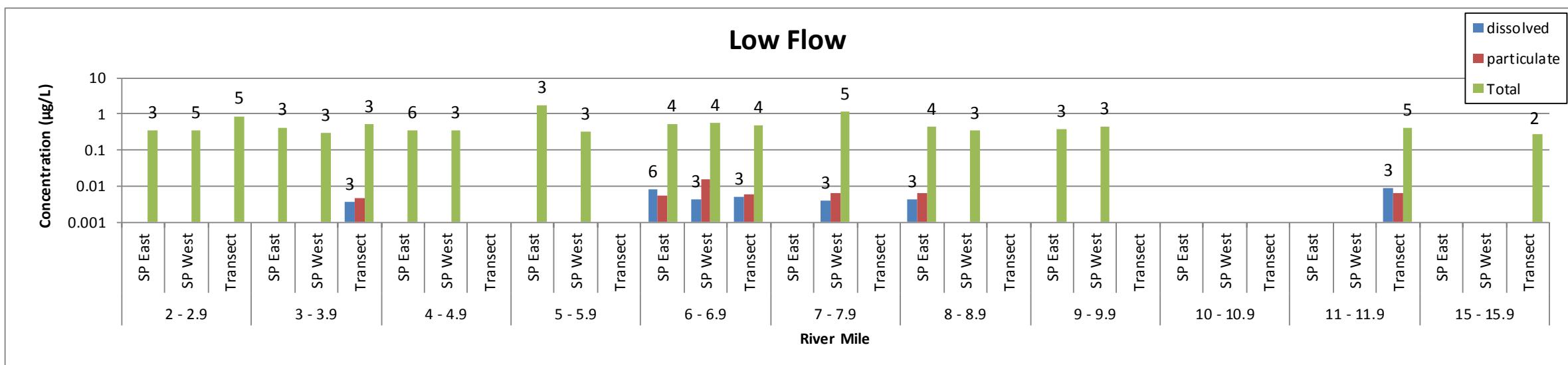
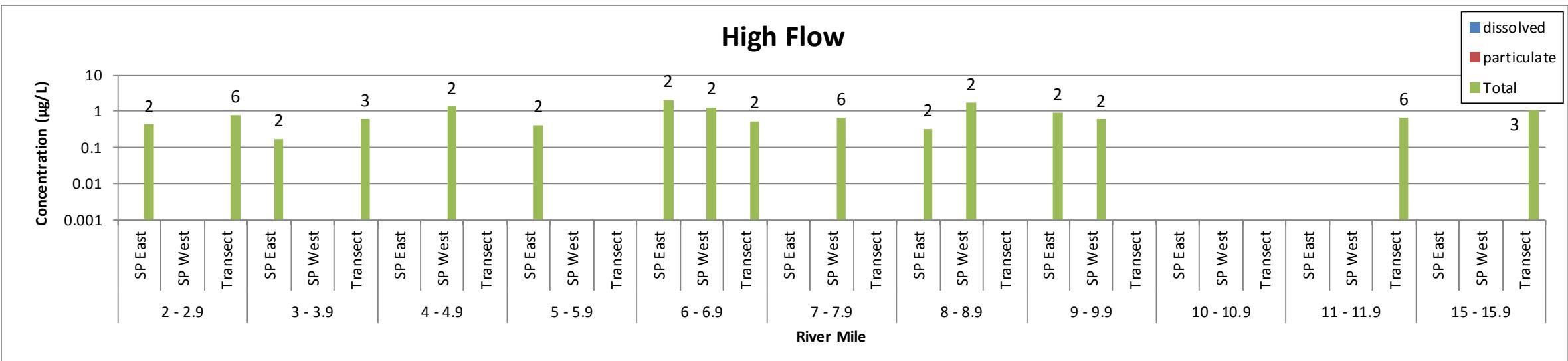


Figure 5.4-28
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point BEHP
Concentrations in Surface Water by Flow Event (RM 2-16)

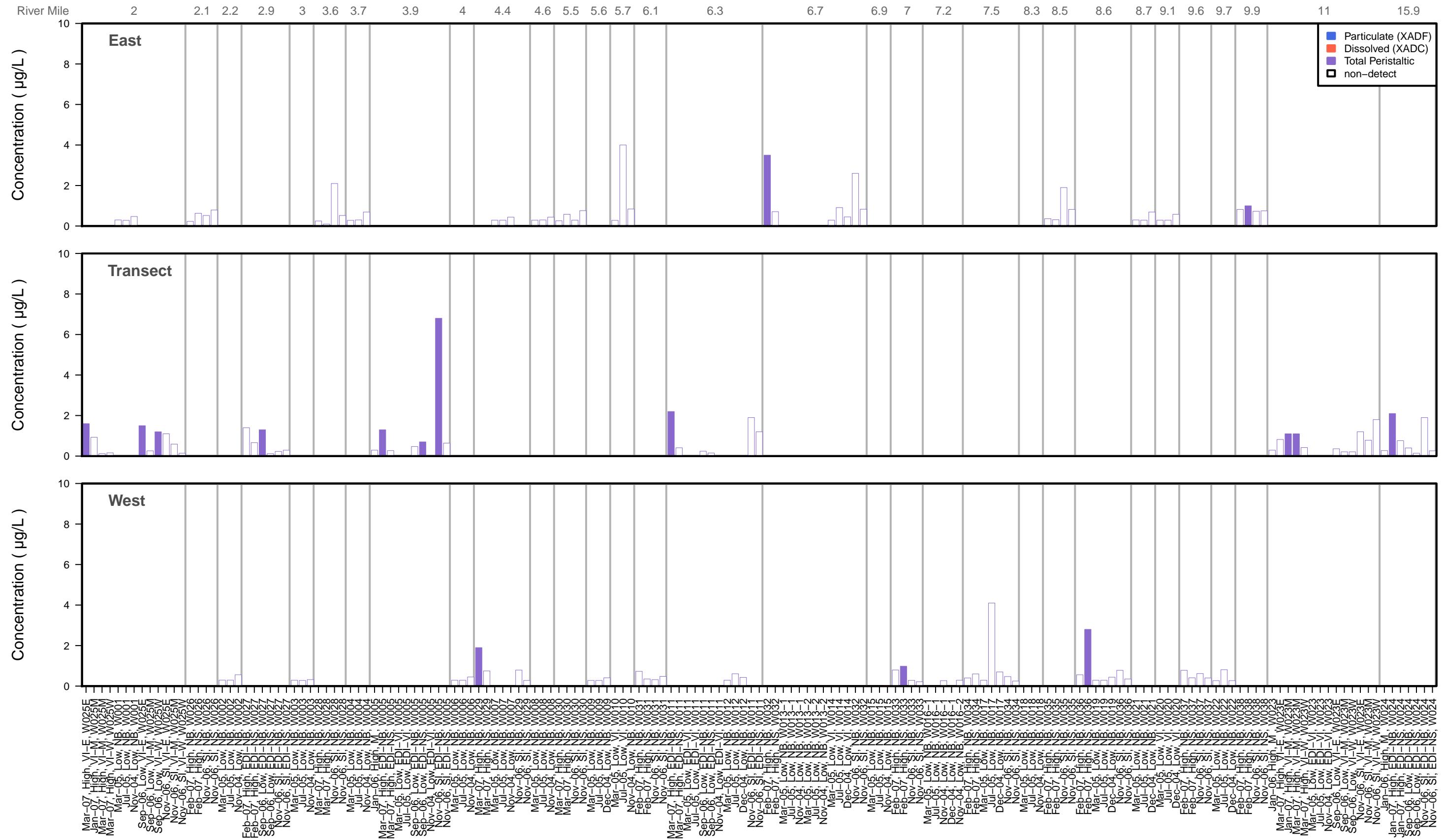


Figure 5.4-29a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram by Channel Position of BEHP Concentrations in Surface Water, RM 2-16

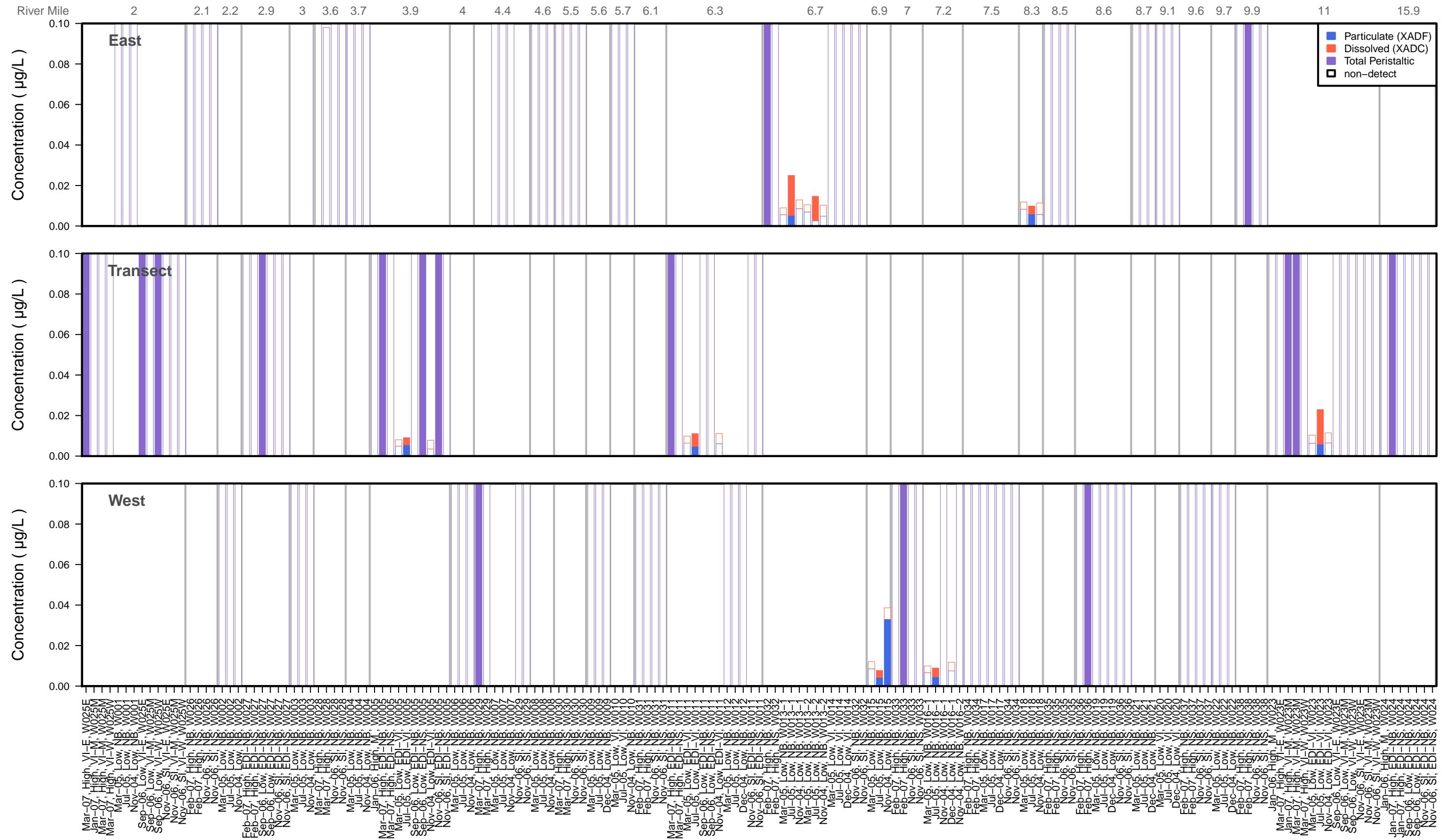


Figure 5.4-29b
 Portland Harbor RI/FS
 Remedial Investigation Report

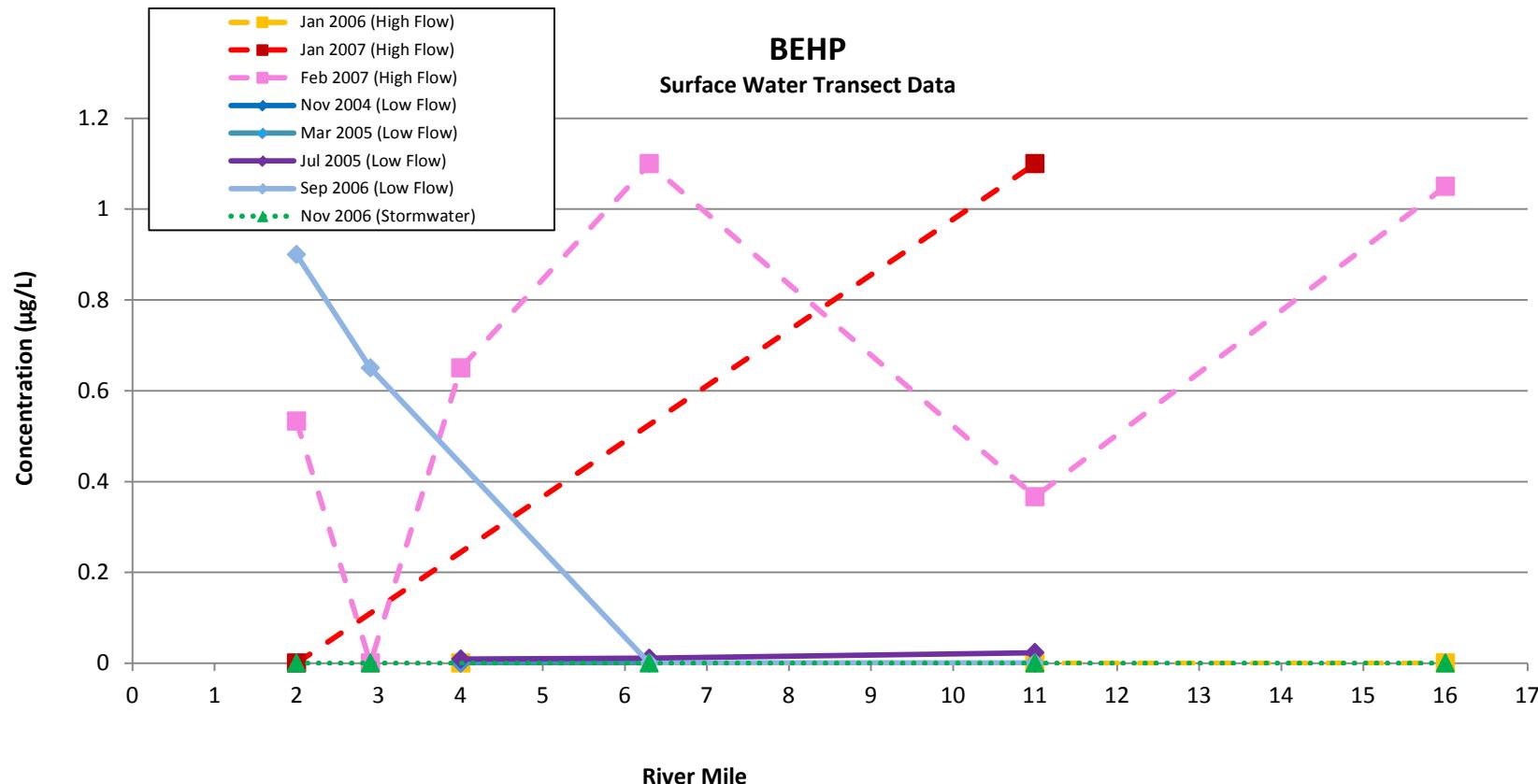


Figure 5.4-30
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect BEHP Concentrations in Surface Water by River Mile (RM 2–16)

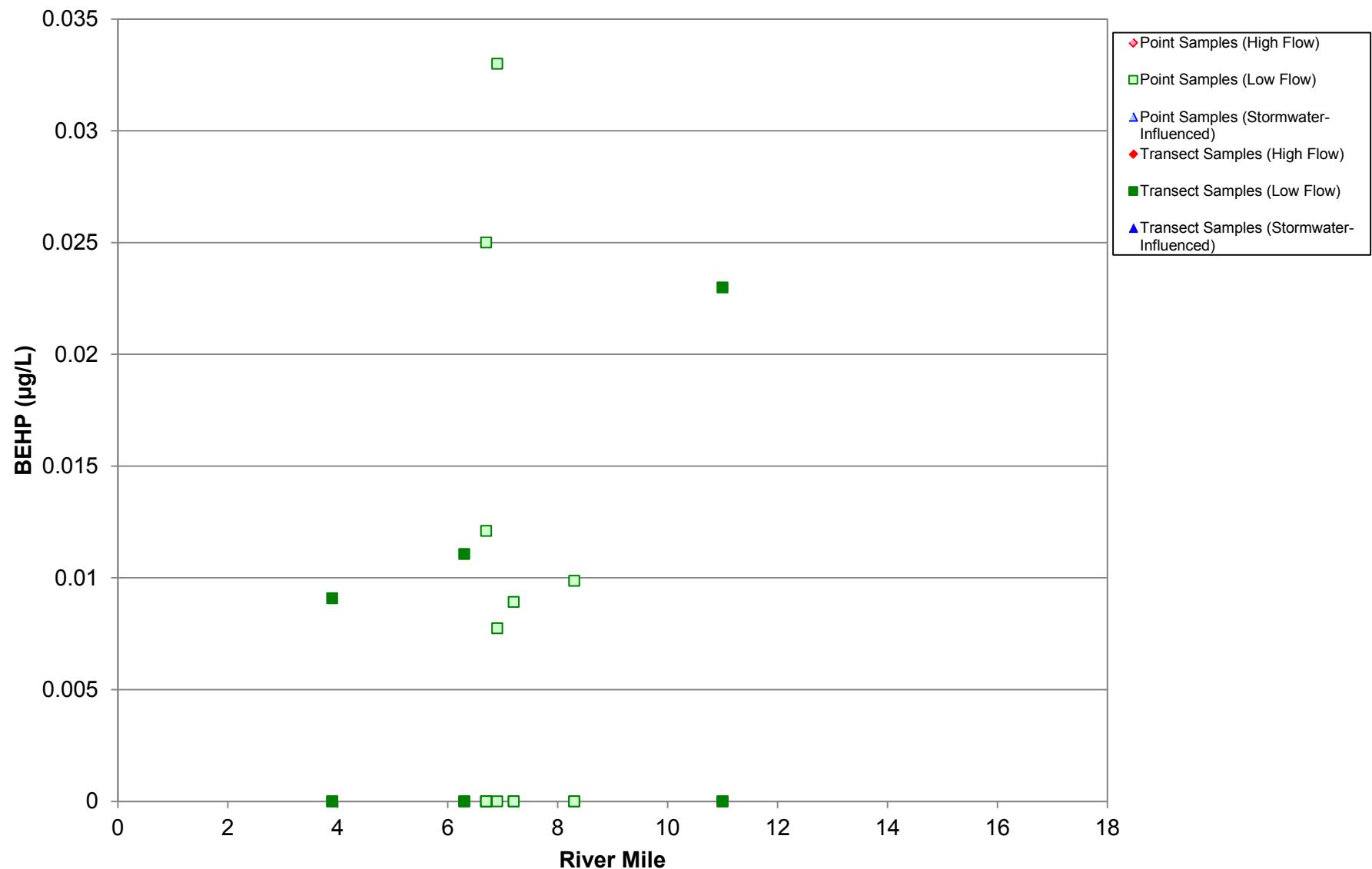


Figure 5.4-31
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Detected BEHP Concentrations in
Surface Water by River Mile (RM 2-16)

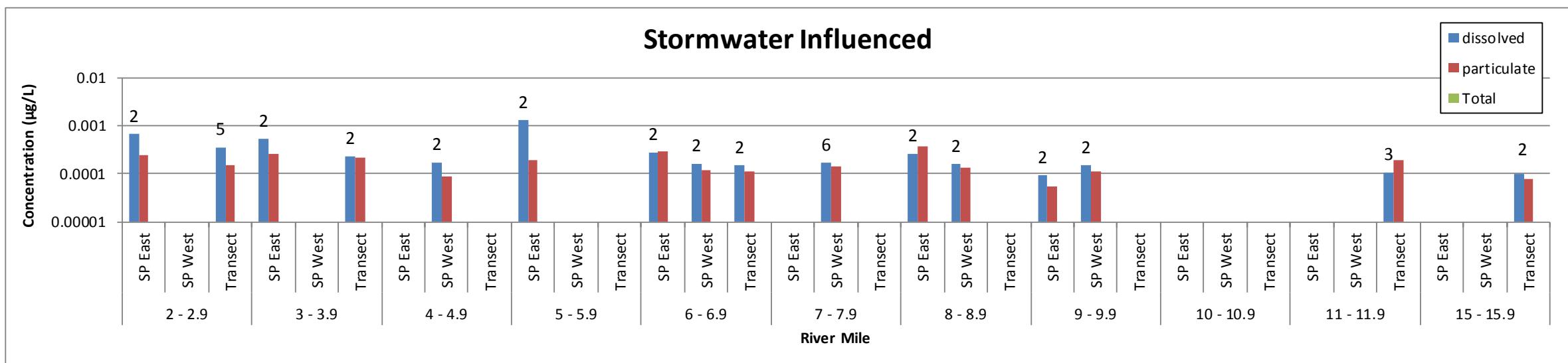
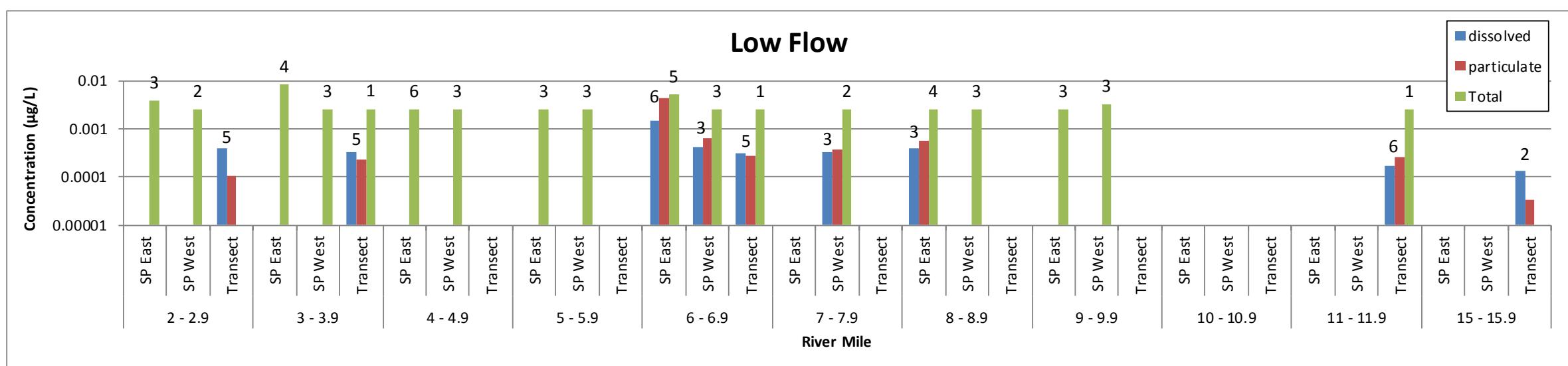
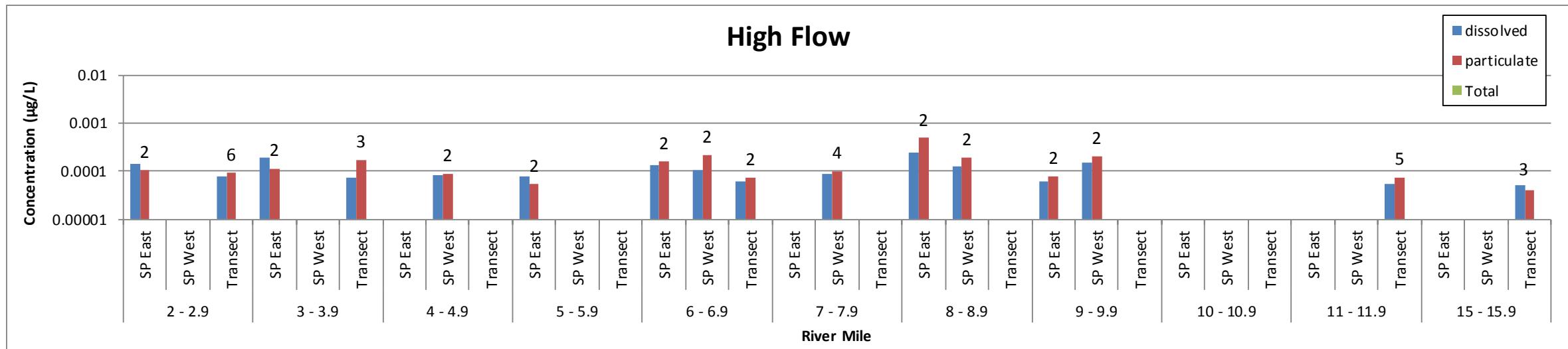


Figure 5.4-32
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram of Transect and Mean Single-Point Total Chlordanes
 Concentrations in Surface Water by Flow Event (RM 2-16)

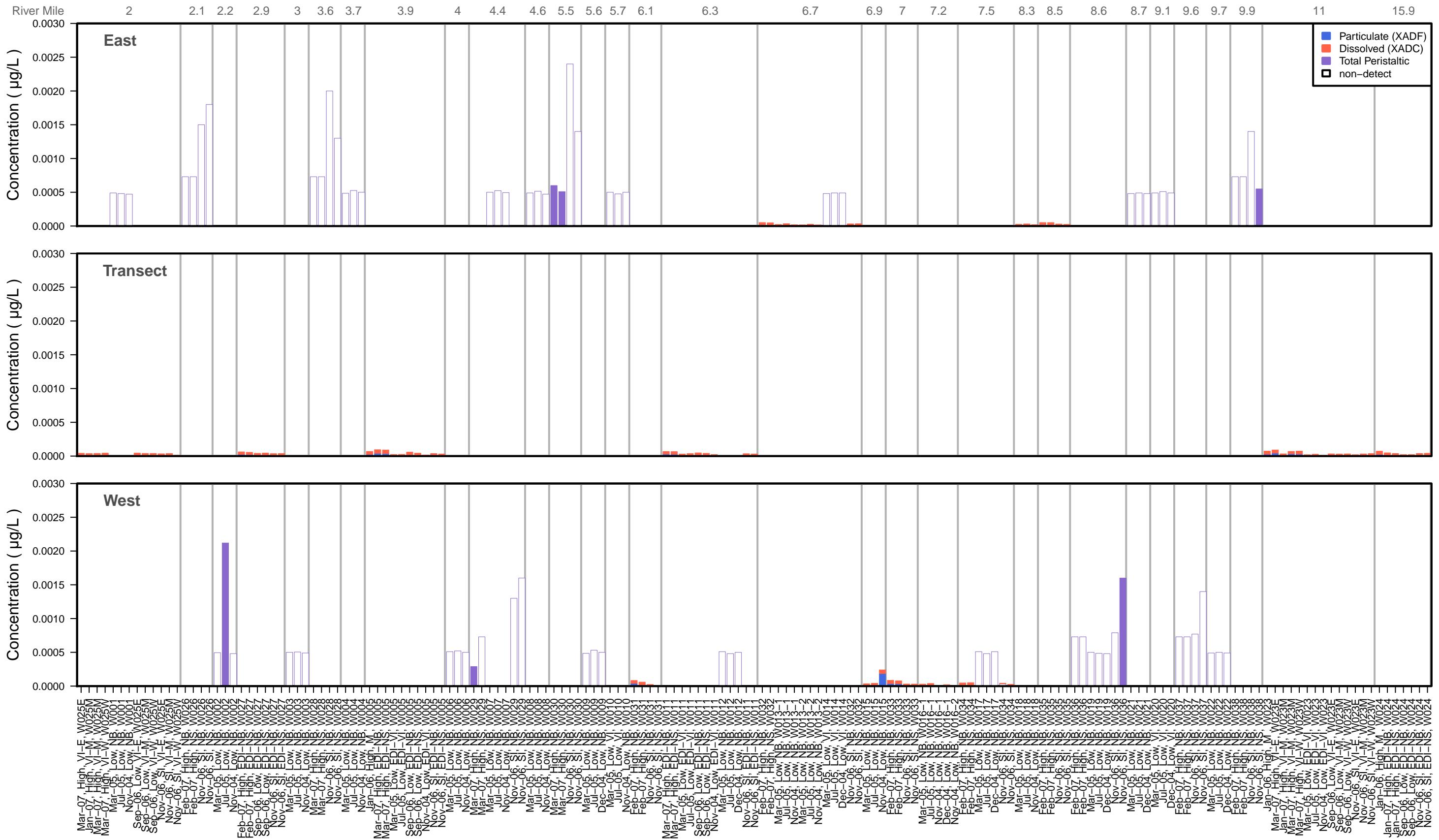


Figure 5.4-33a
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Total Chlordanes Concentrations in Surface Water, RM 2-16

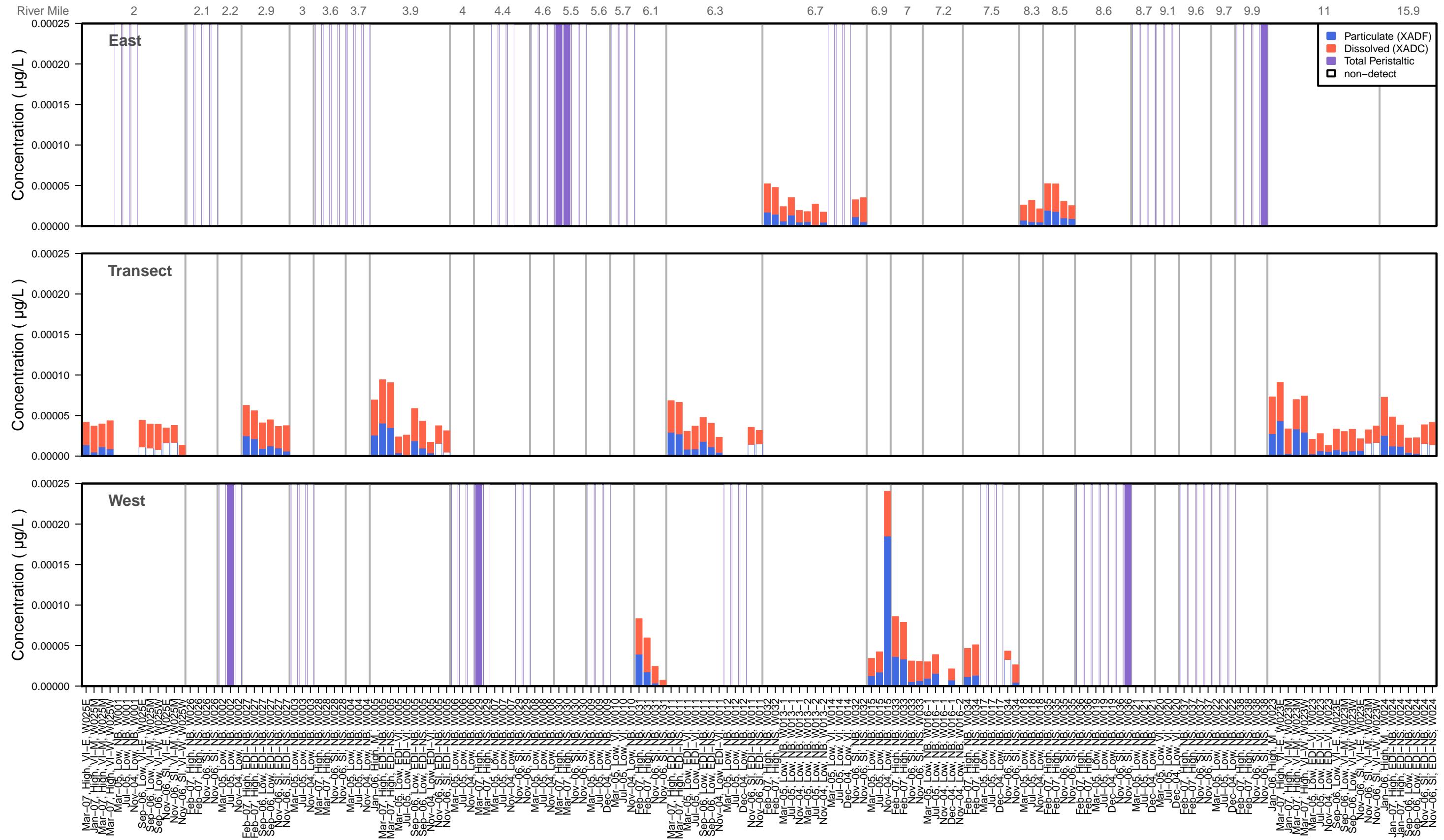


Figure 5.4– 33b
Portland Harbor RI/FS
Remedial Investigation Report

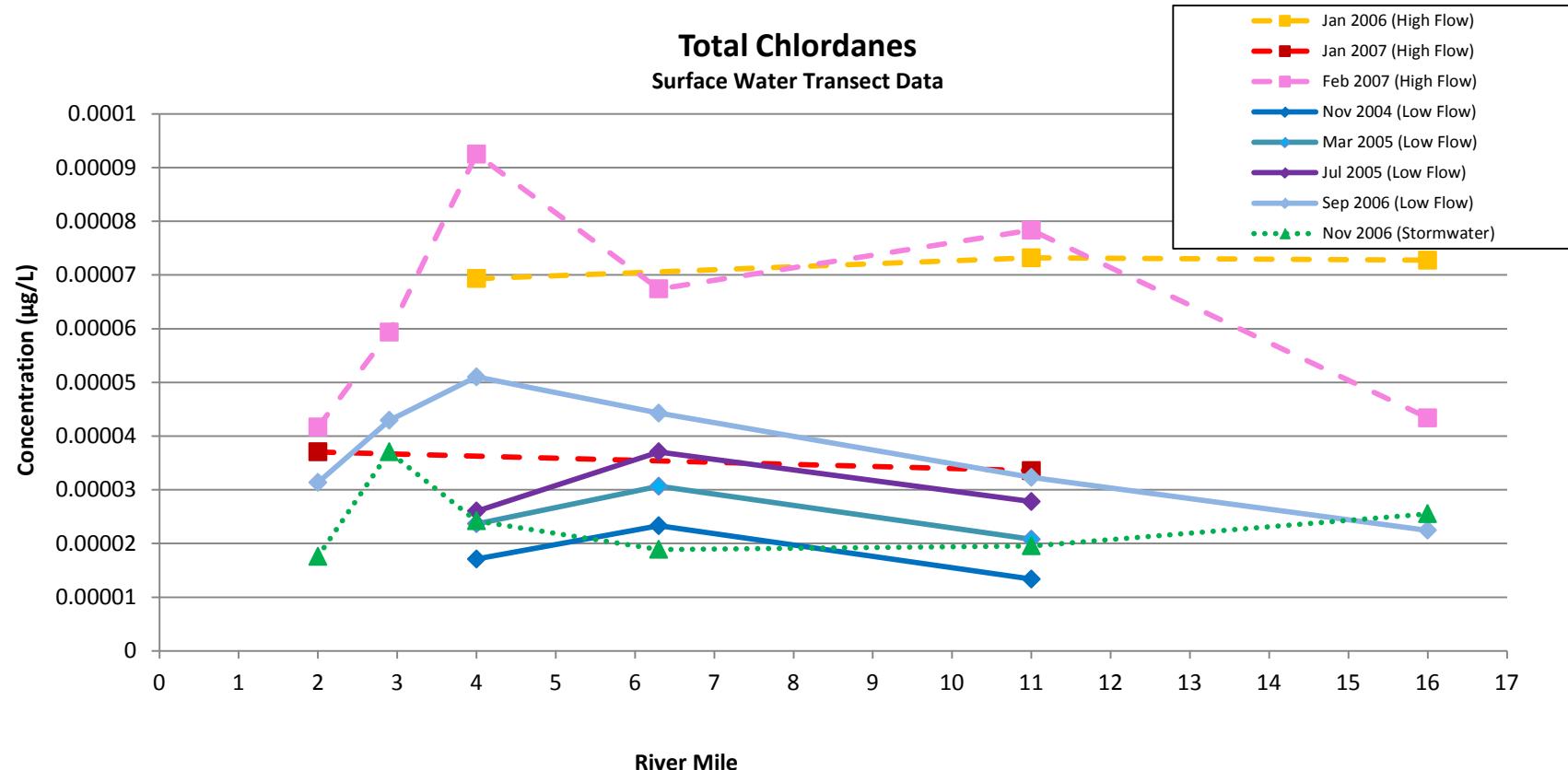


Figure 5.4-34
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Total Chlordanes Concentrations in Surface Water by River Mile (RM 2–16)

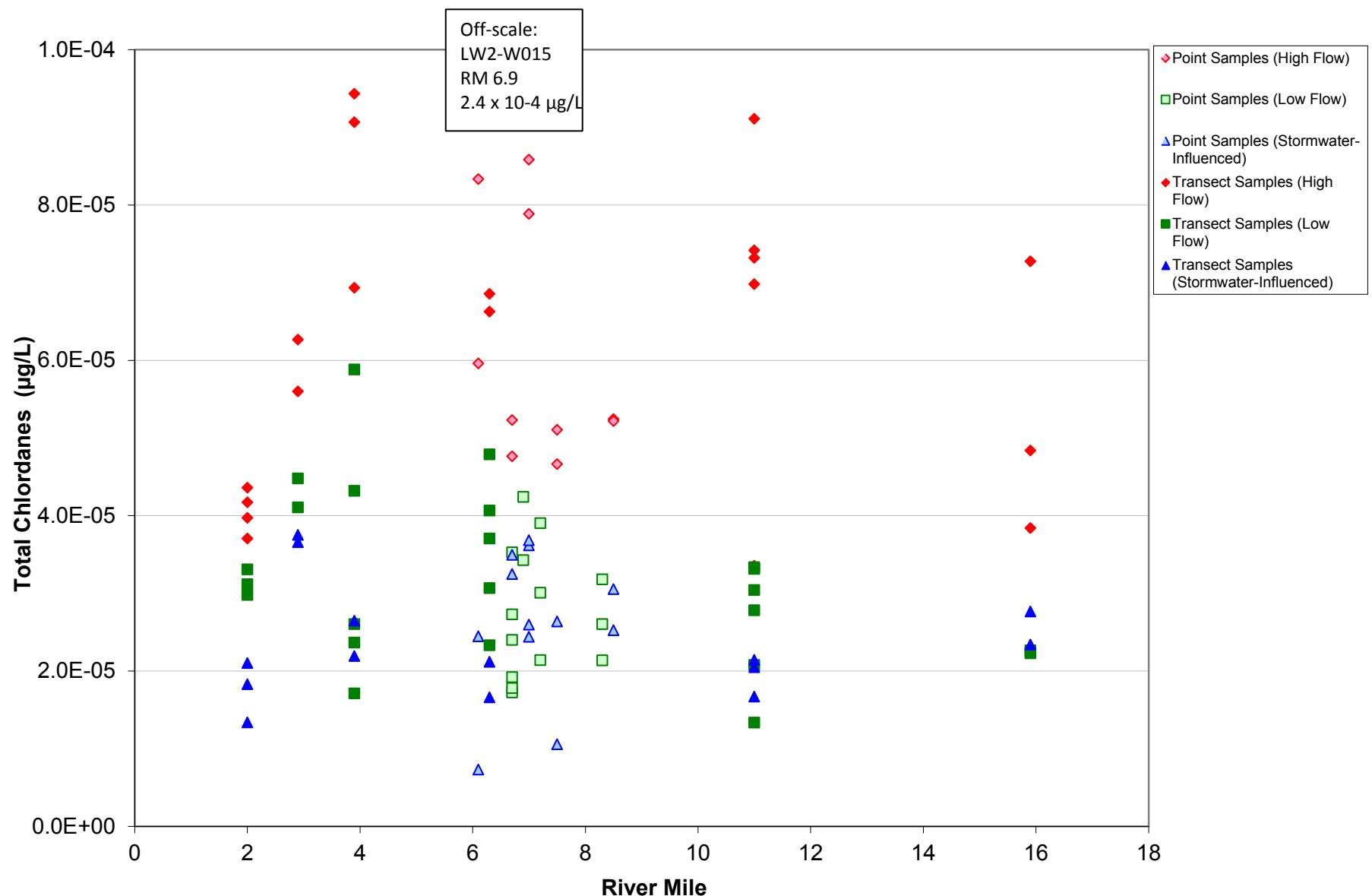


Figure 5.4-35
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Total Chlordane Concentrations in Surface Water by River Mile (RM 2-16)

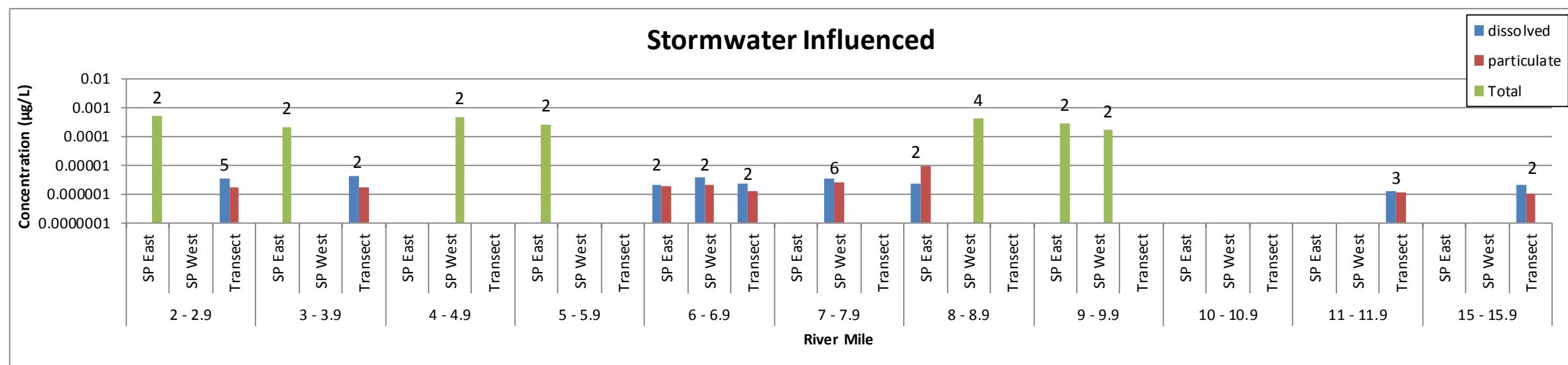
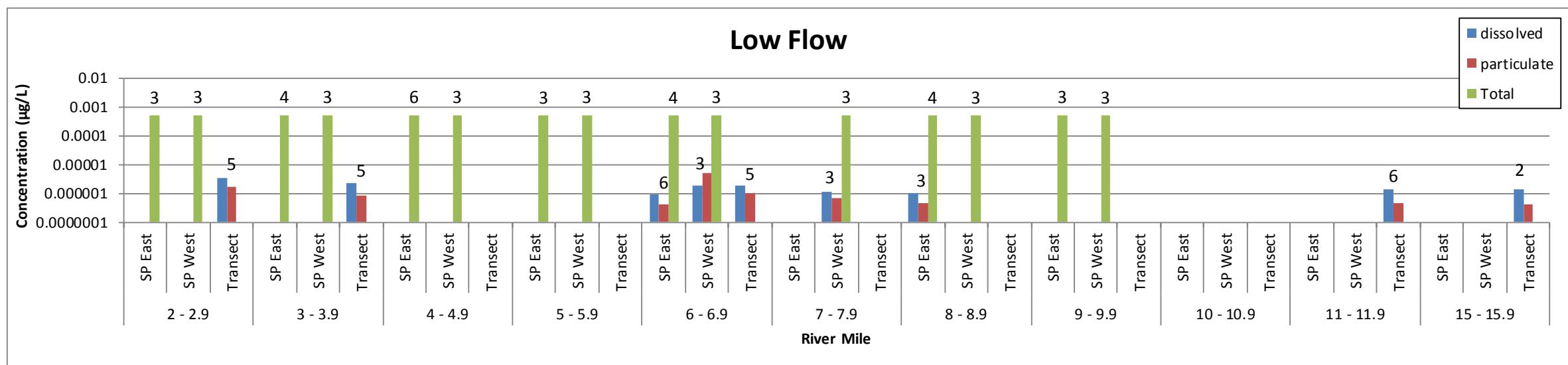
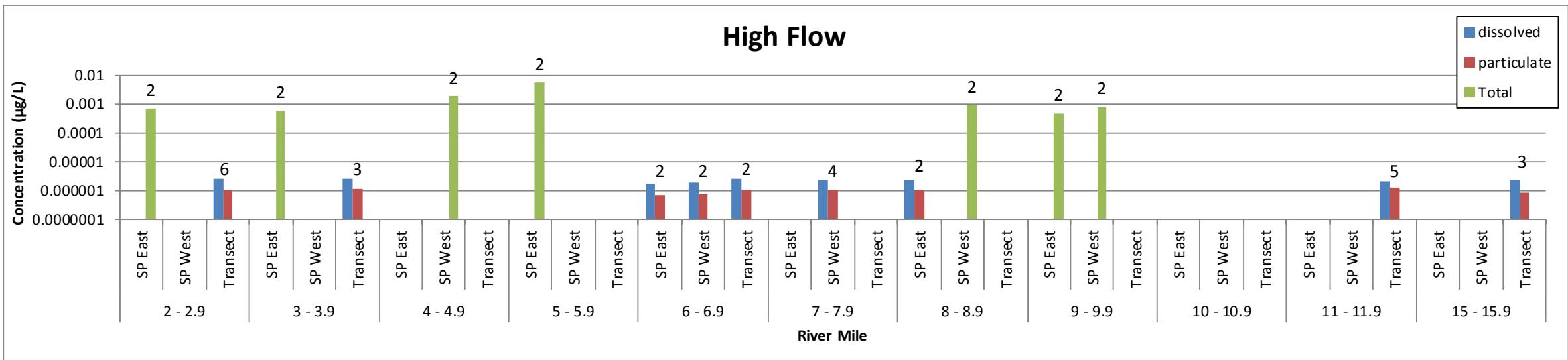


Figure 5.4-36
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Aldrin
Concentrations in Surface Water by Flow Event (RM 2-16)

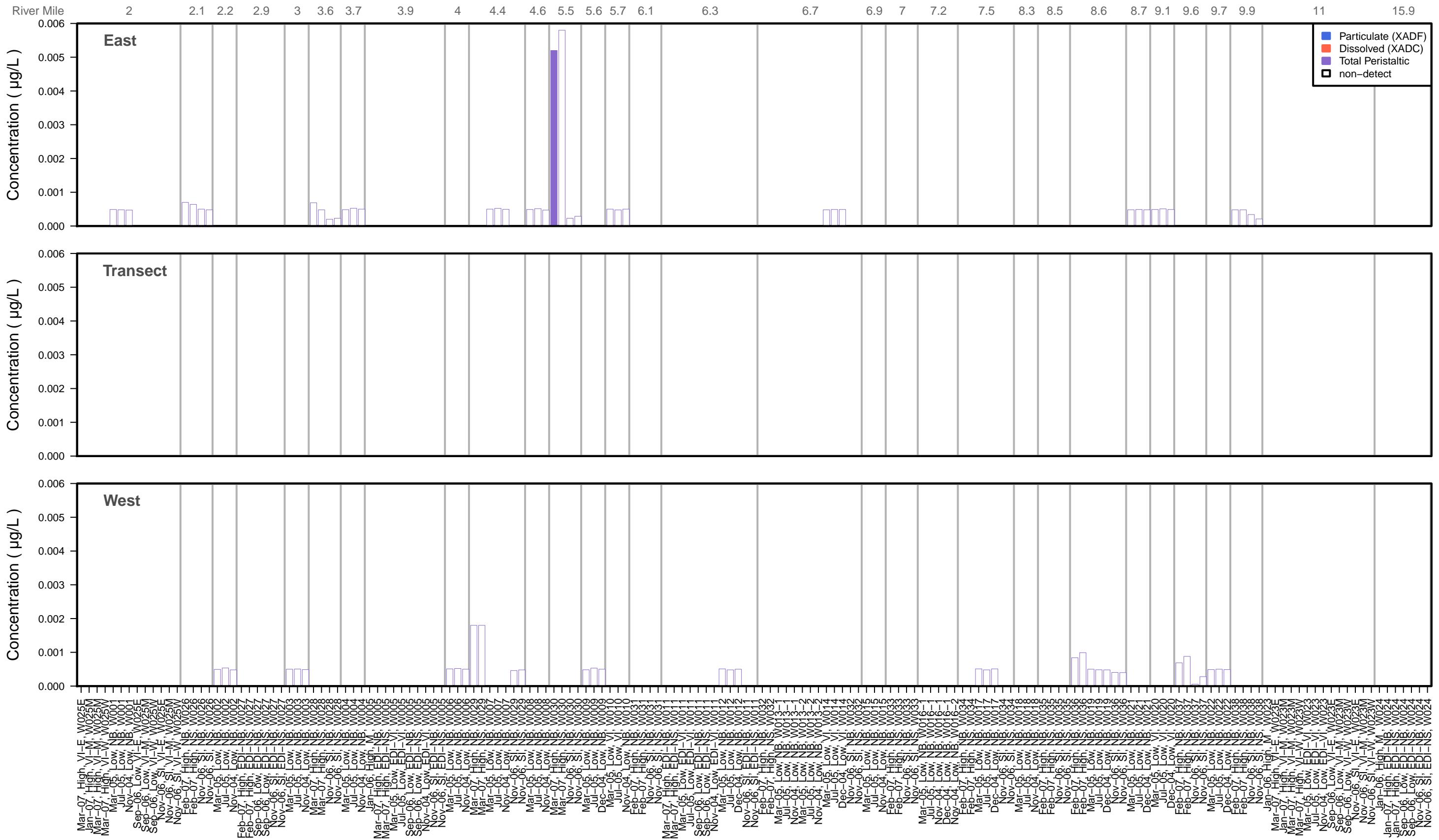


Figure 5.4-37a
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Aldrin Concentrations in Surface Water, RM 2-16

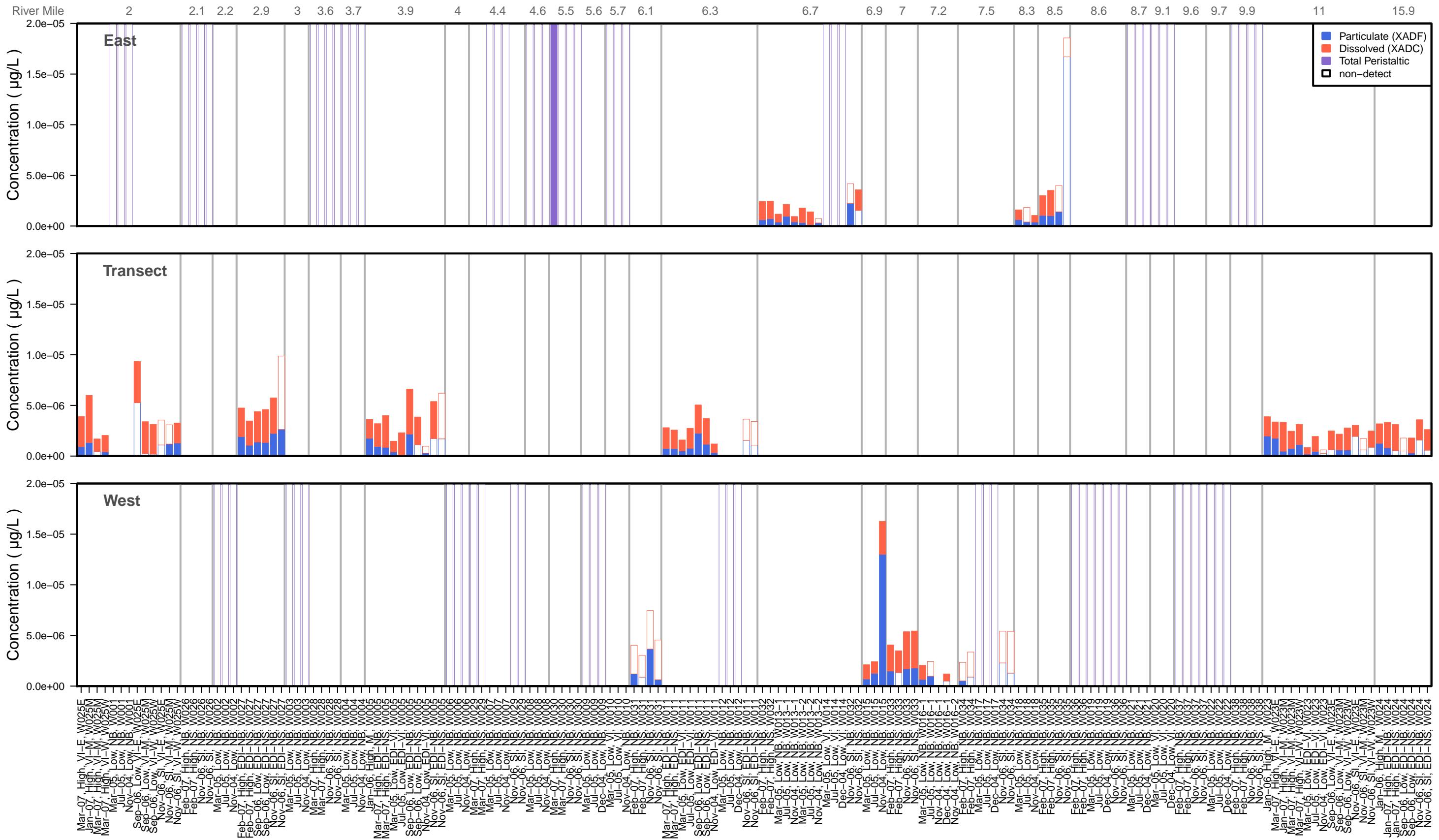


Figure 5.4-37b
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Aldrin Concentrations in Surface Water, RM 2-16 (Scale Zoomed)

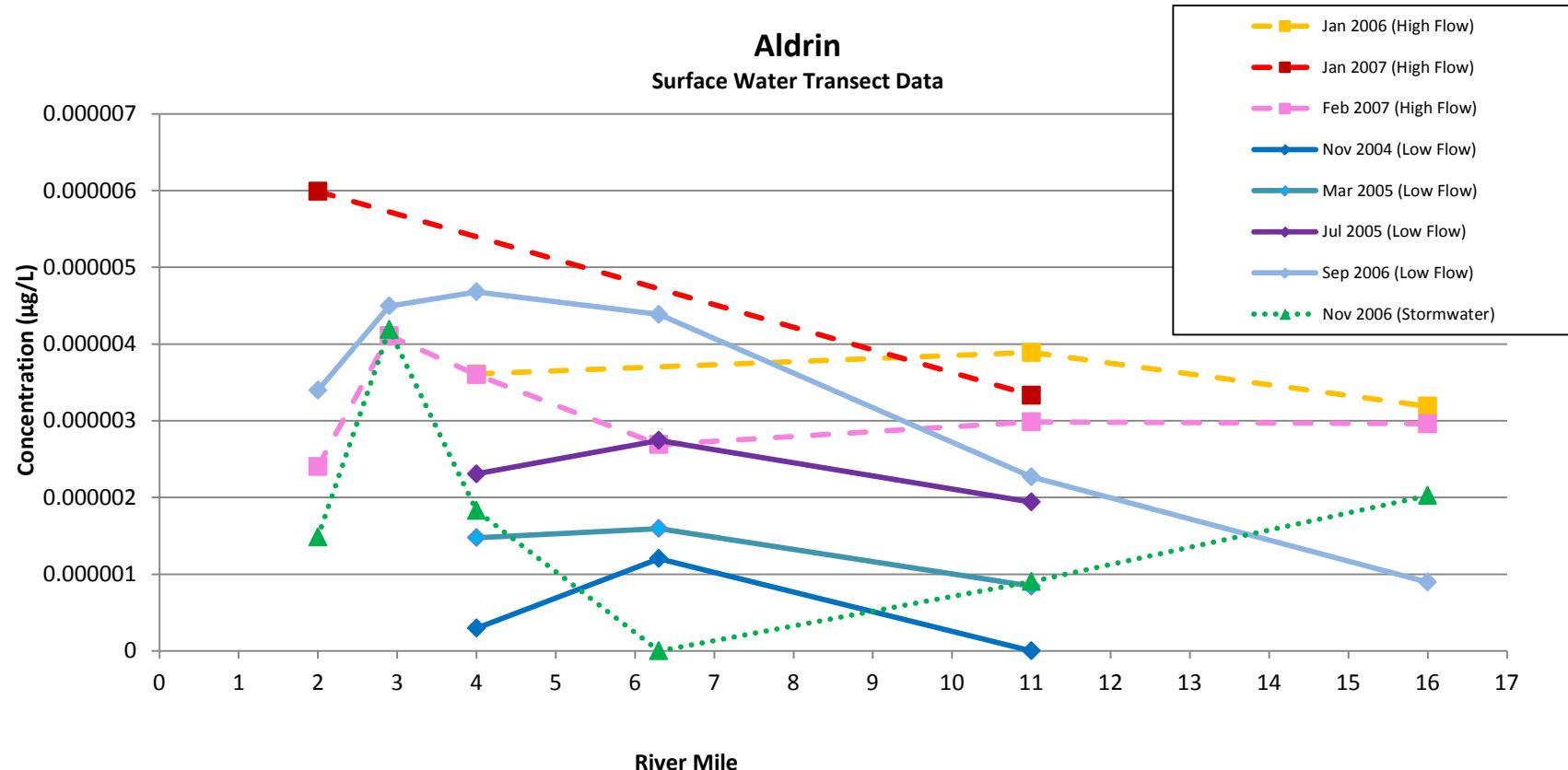


Figure 5.4-38
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Aldrin Concentrations in Surface Water by River Mile (RM 2–16)

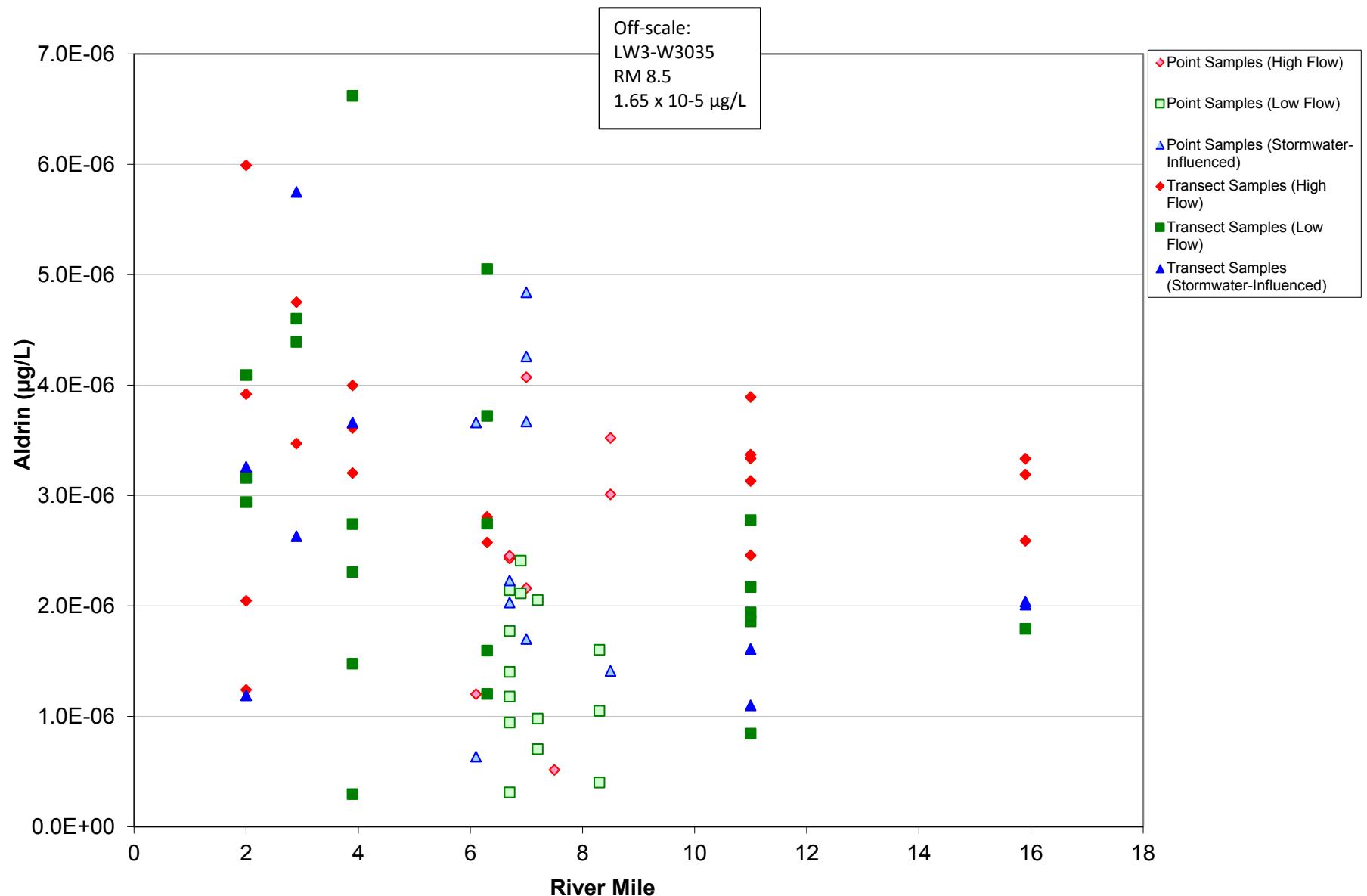


Figure 5.4-39
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Aldrin Concentrations in Surface Water by River Mile (RM 2-16)

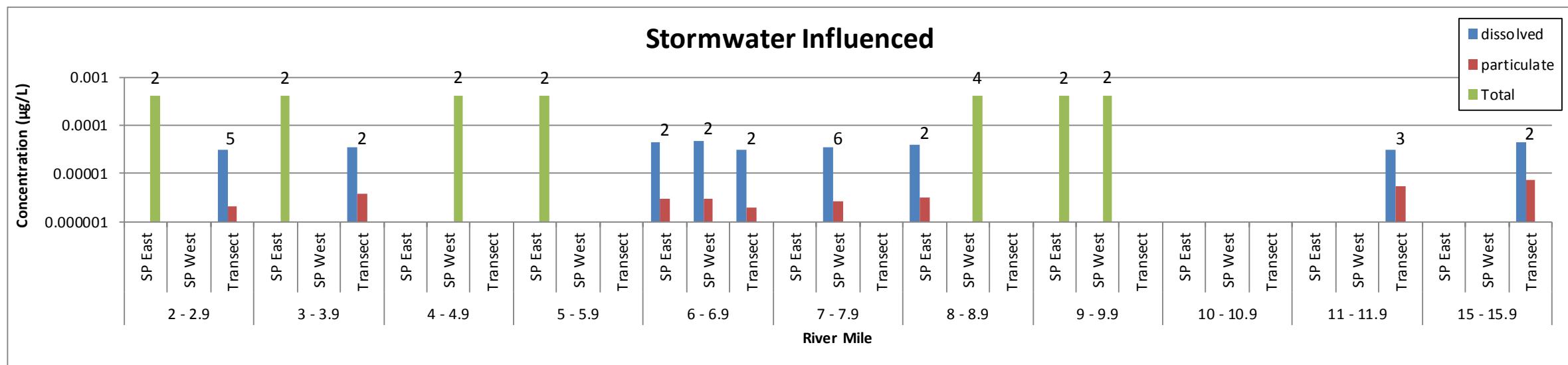
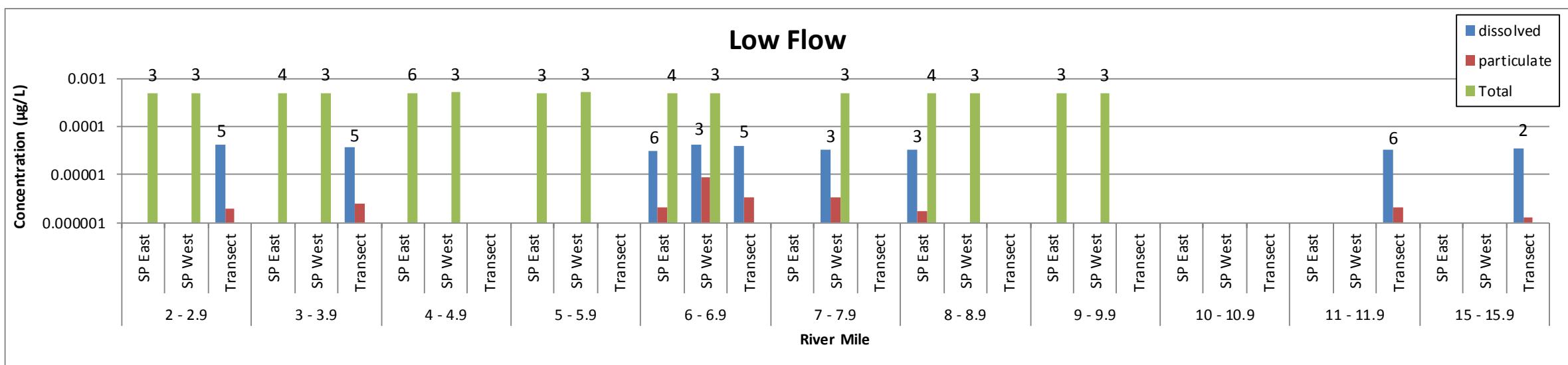
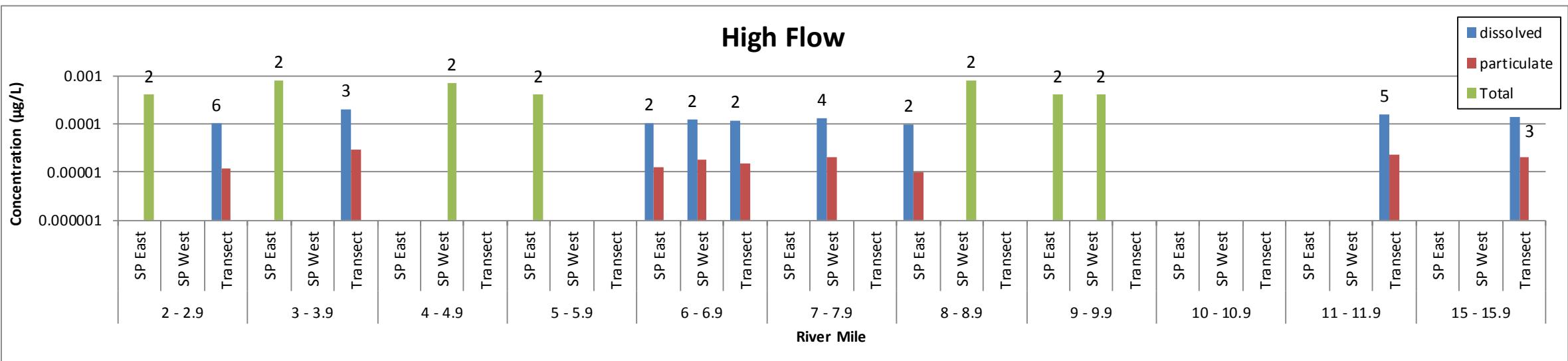


Figure 5.4-40
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Dieldrin
Concentrations in Surface Water by Flow Event (RM 2-16)

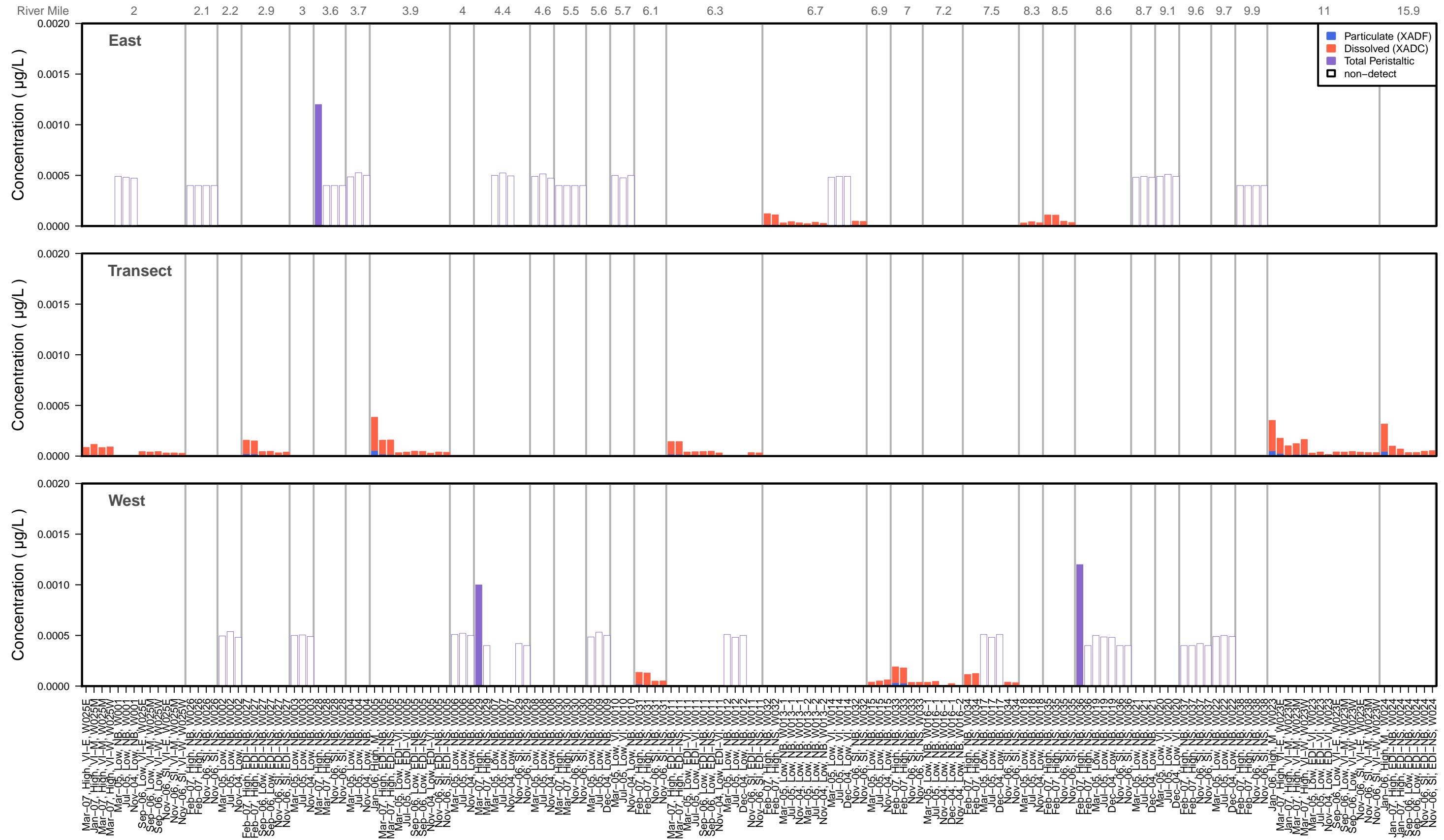


Figure 5.4-41a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram by Channel Position of Dieldrin Concentration in Surface Water, RM 2-16

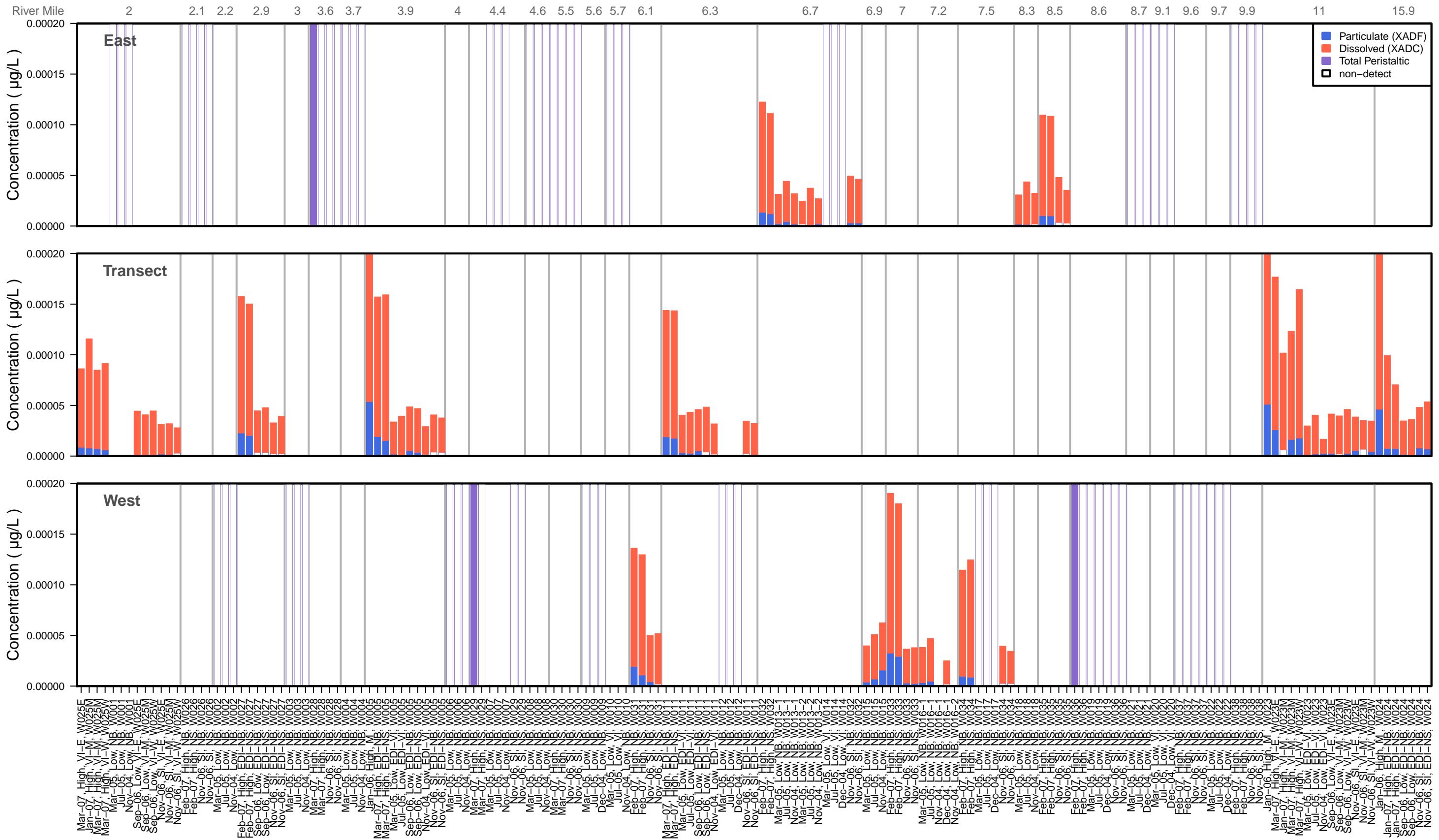


Figure 5.4-41b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram by Channel Position of Dieldrin Concentrations in Surface Water, RM 2-16 (Scale Zoomed)

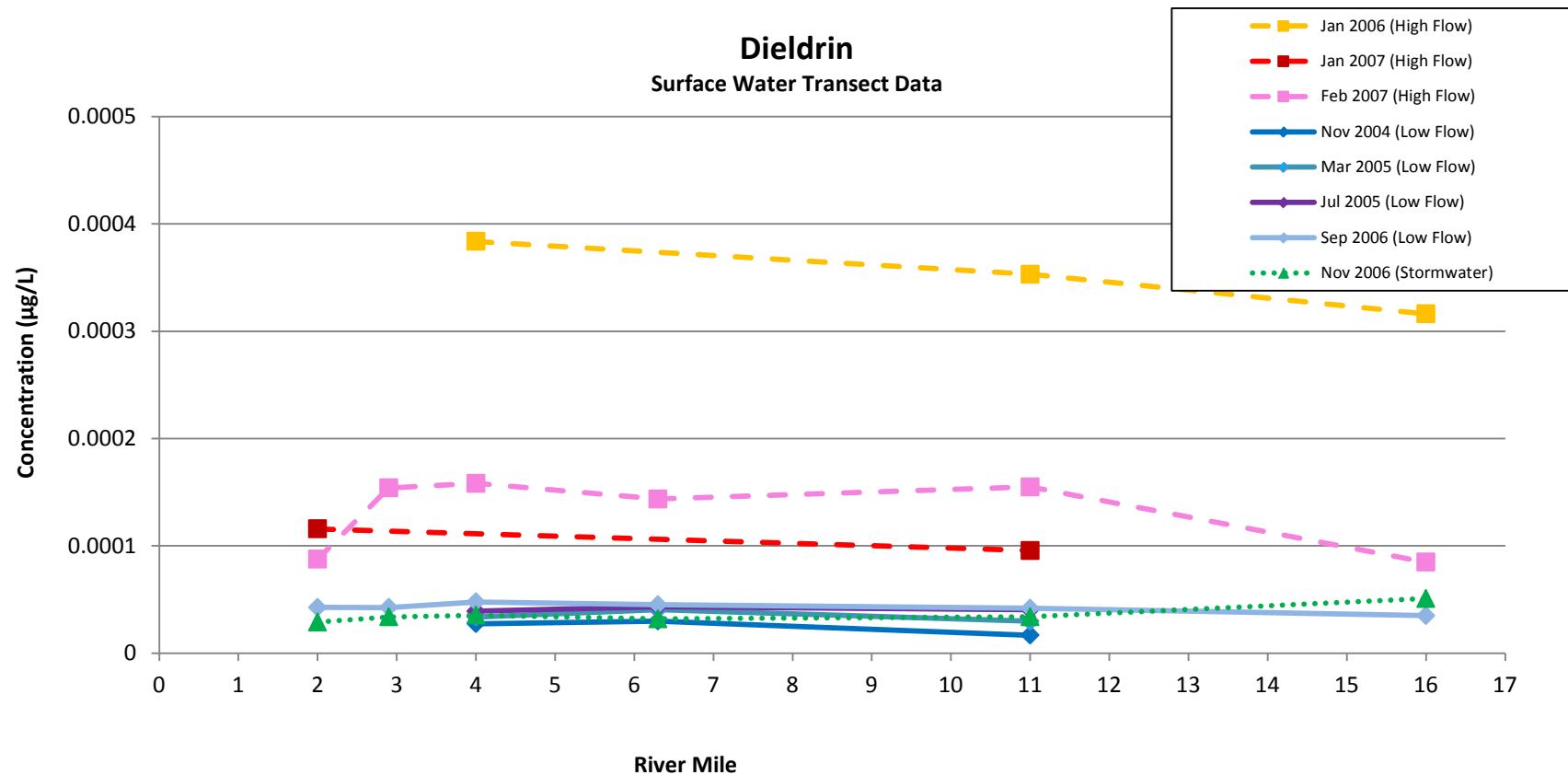


Figure 5.4-42
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Dieldrin Concentrations in Surface Water by River Mile (RM 2–16)

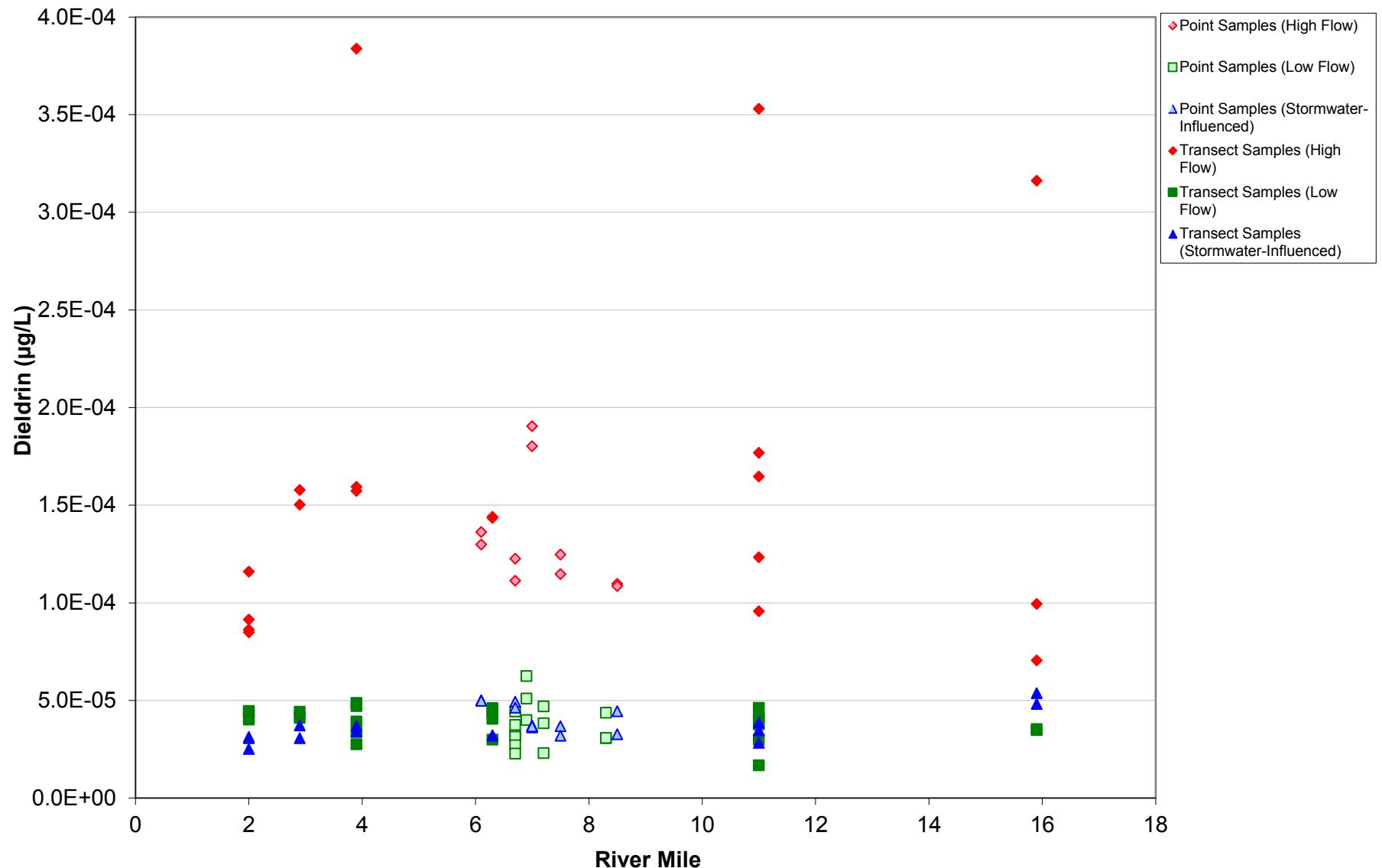


Figure 5.4-43
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Dieldrin Concentrations in Surface Water by River Mile (RM 2-16)

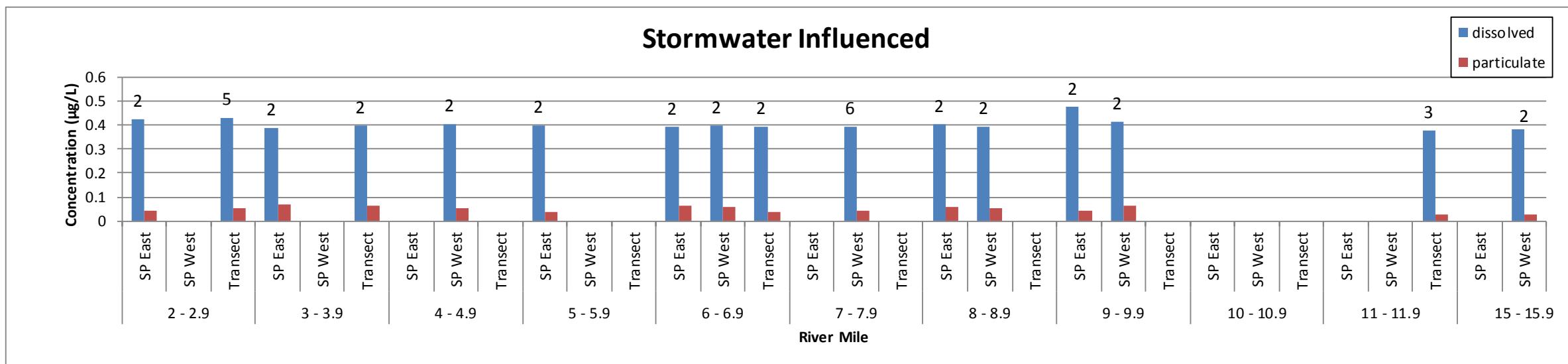
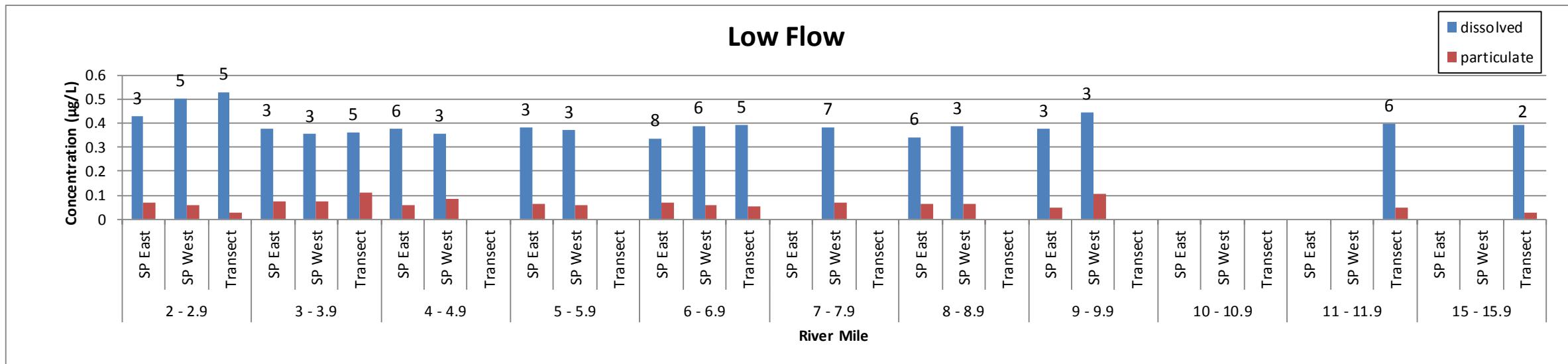
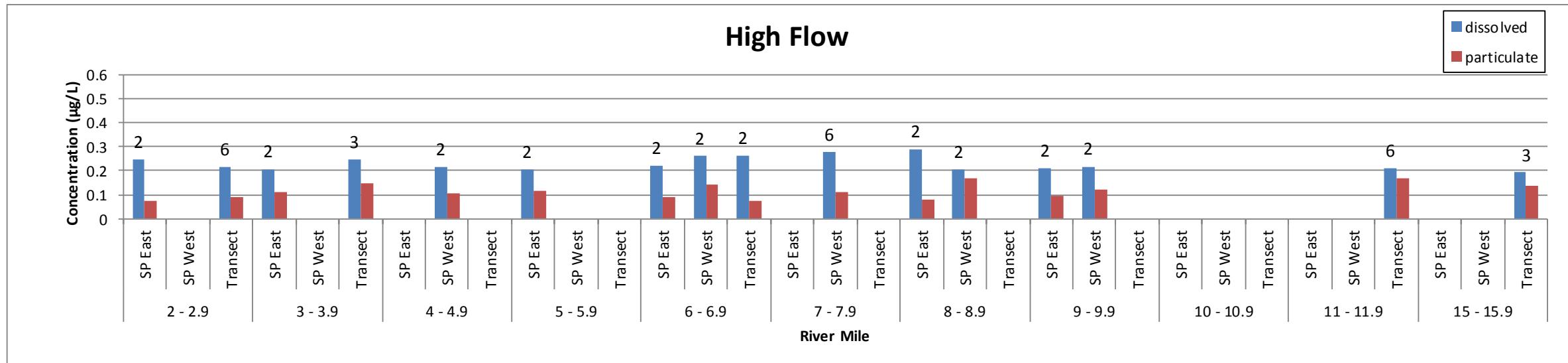


Figure 5.4-44
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Arsenic
Concentrations in Surface Water by Flow Event (RM 2-16)

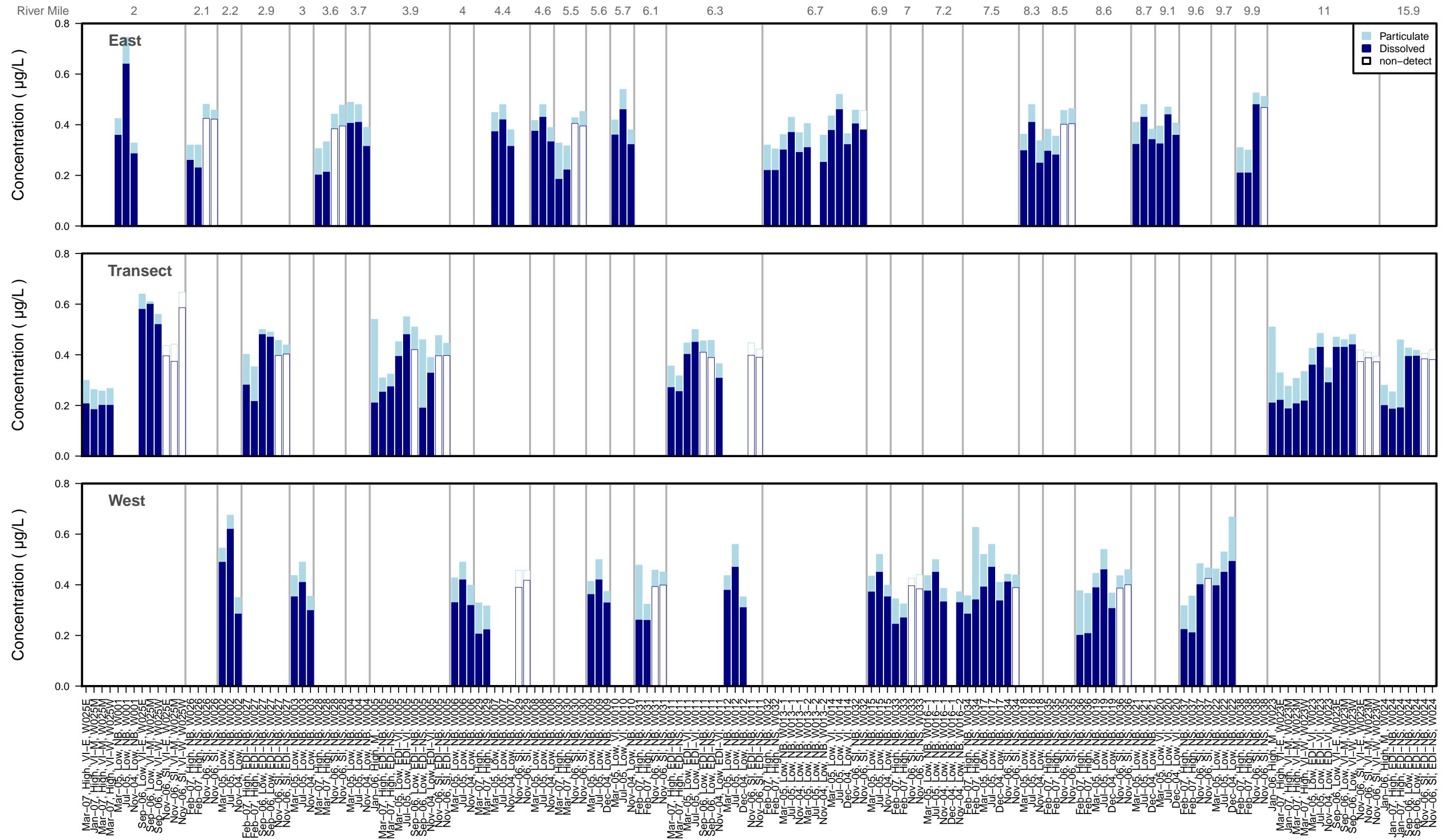


Figure 5.4-45
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram by Channel Position of Arsenic Concentrations in Surface Water, RM 2-16

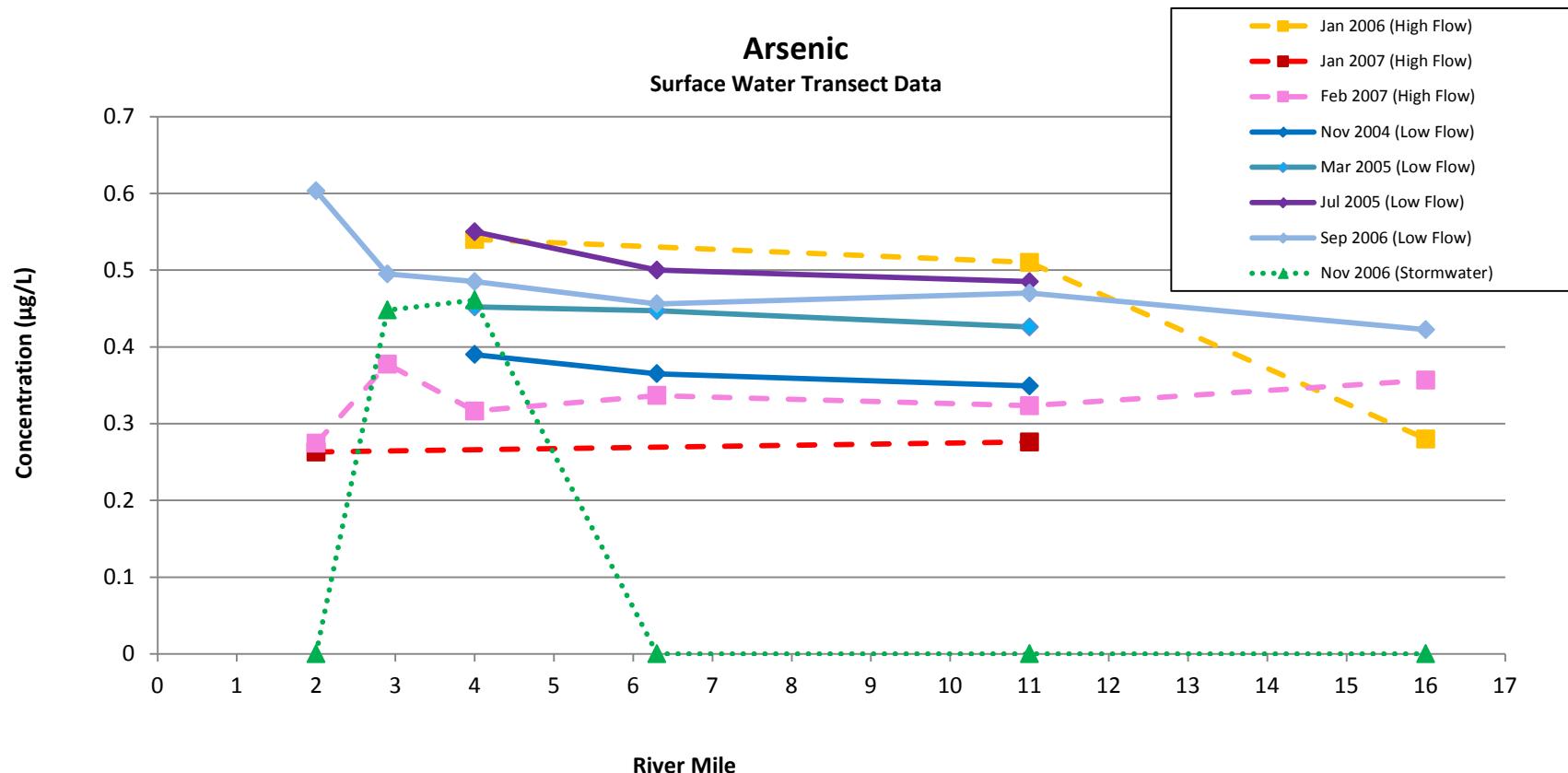


Figure 5.4-46
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Arsenic Concentrations in Surface Water by River Mile (RM 2–16)

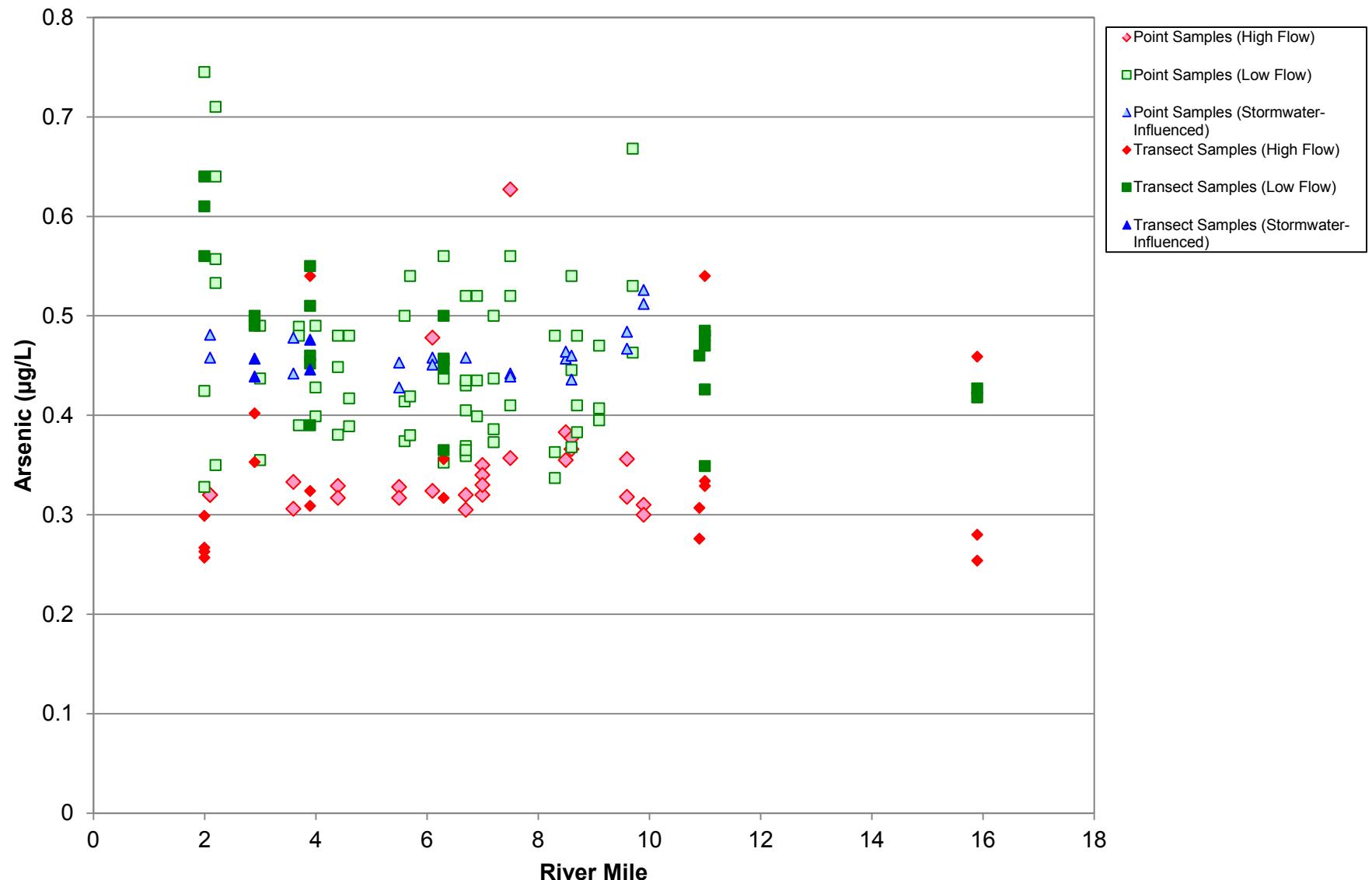


Figure 5.4-47
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Arsenic Concentrations in Surface Water by River Mile (RM 2-16)

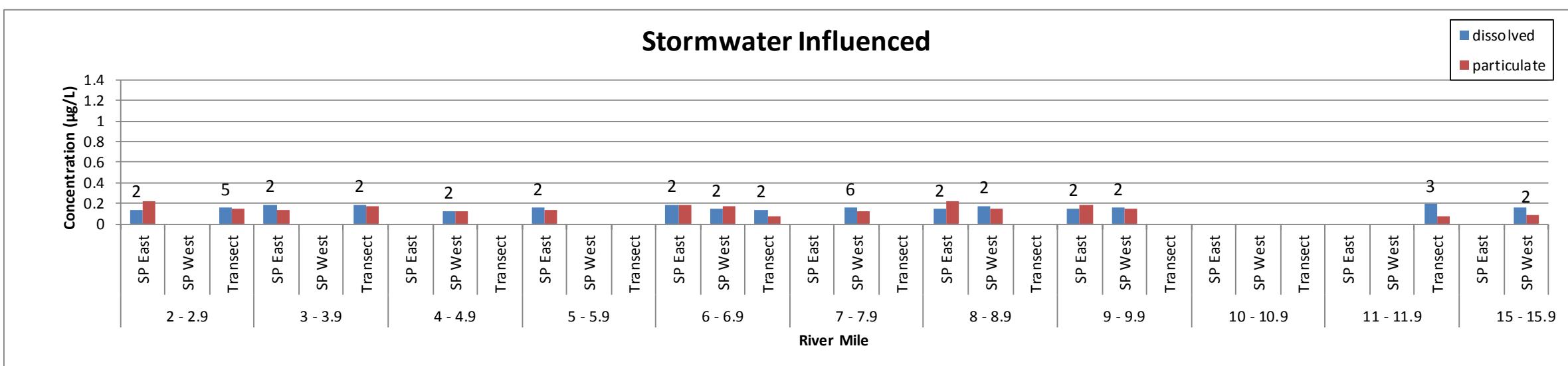
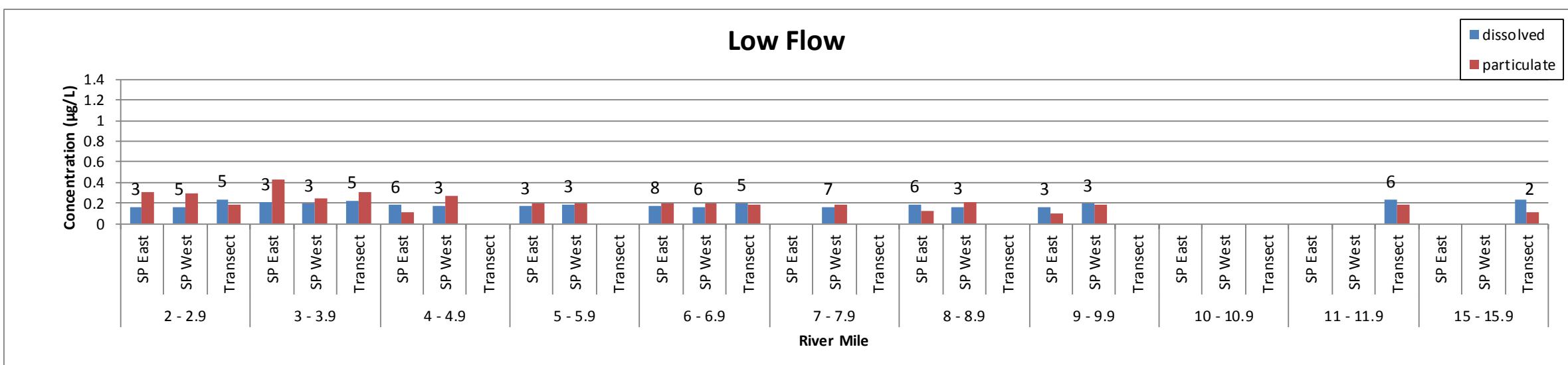
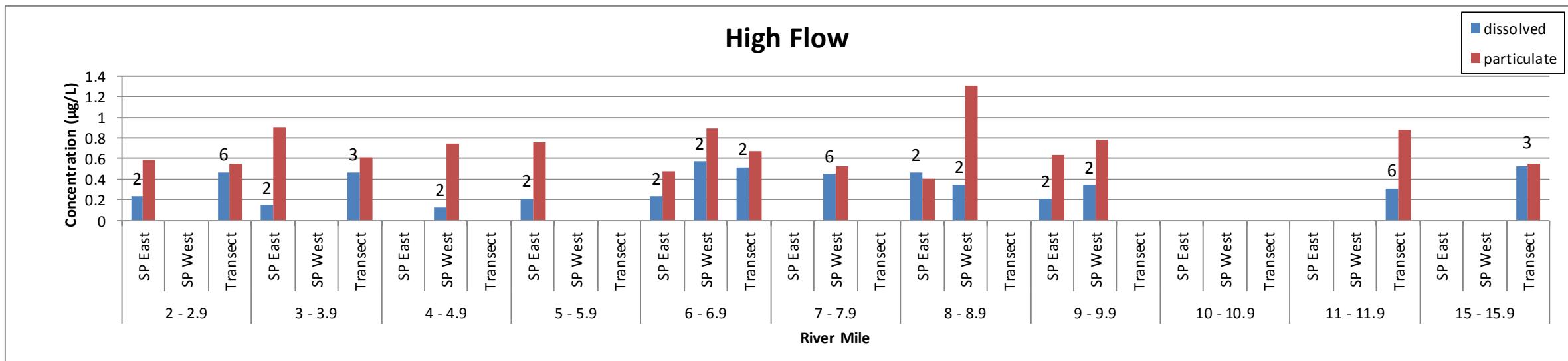


Figure 5.4-48
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Chromium Concentrations in Surface Water by Flow Event (RM 2-16)

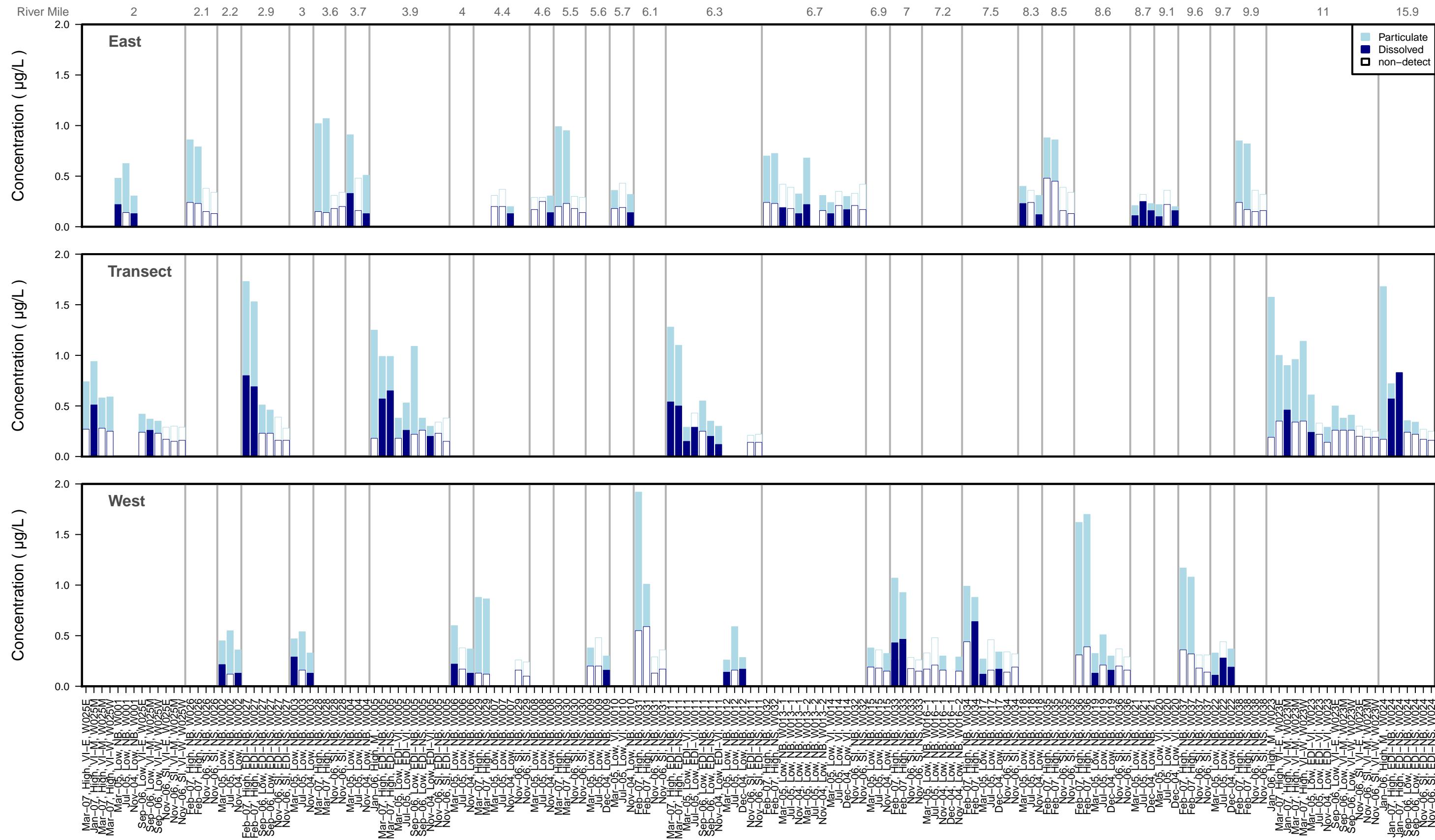


Figure 5.4-49
Portland Harbor RI/FS
Remedial Investigation Report

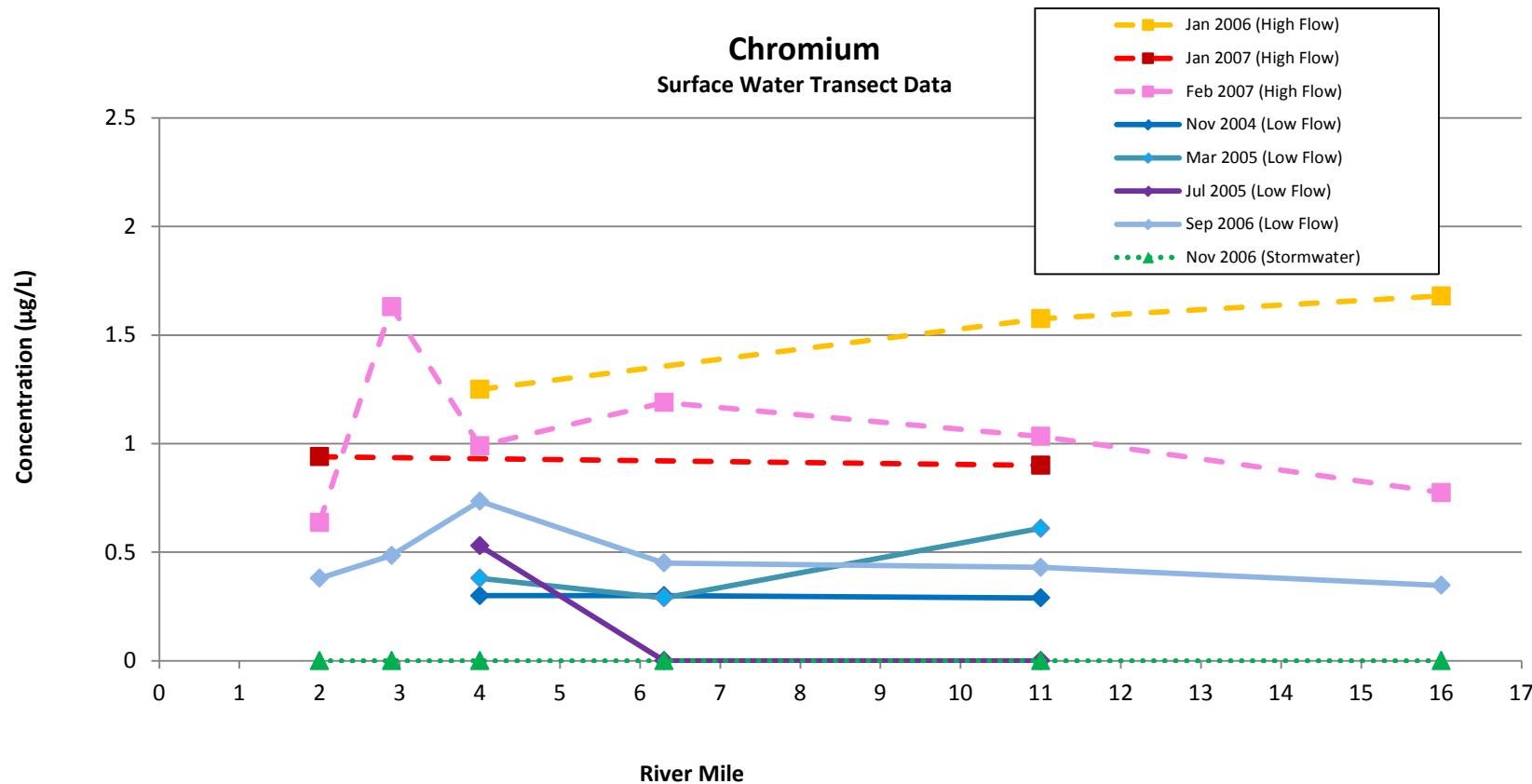


Figure 5.4-50
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Chromium Concentrations in Surface Water by River Mile (RM 2–16)

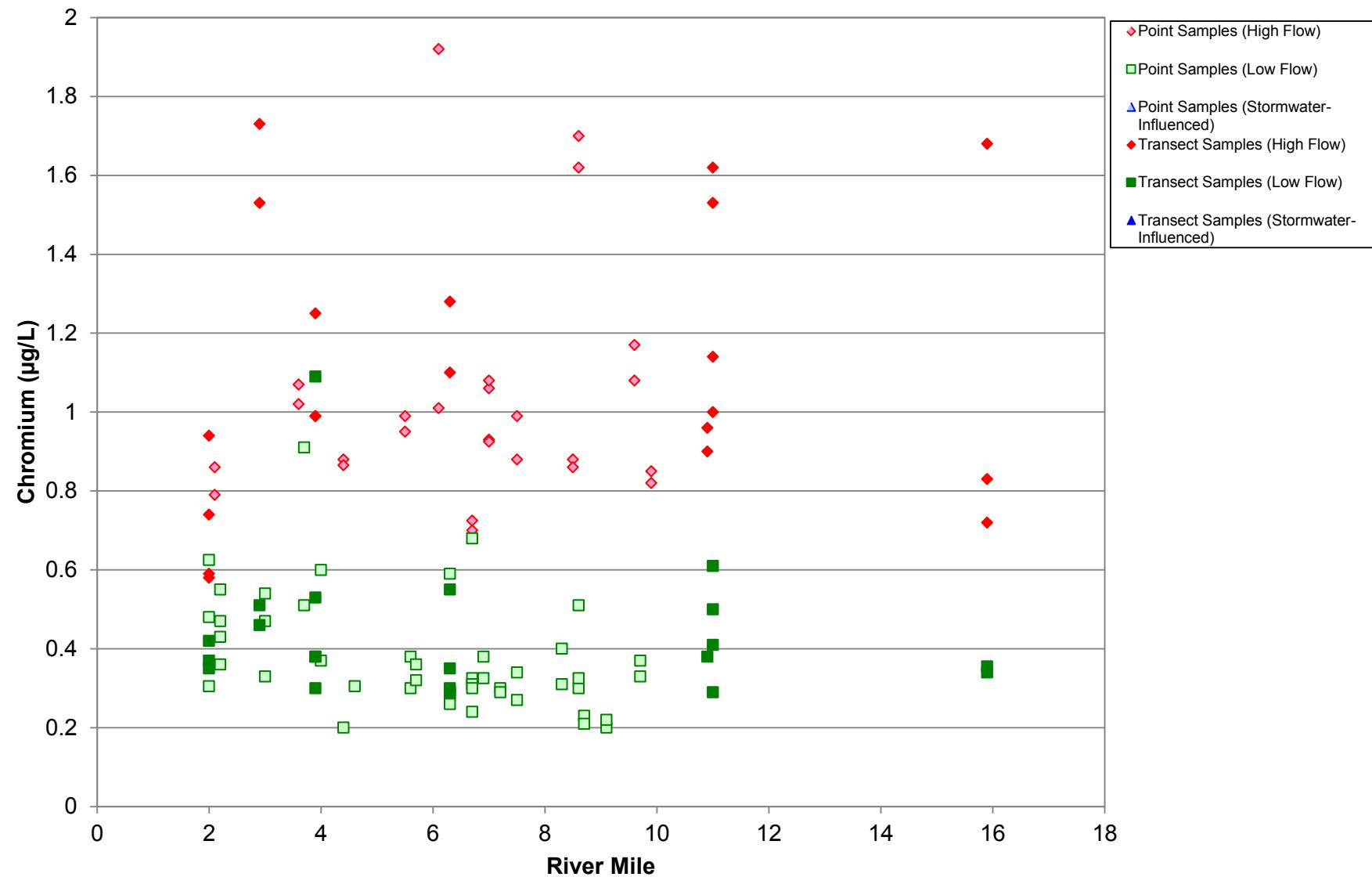


Figure 5.4-51
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Chromium Concentrations in Surface Water by River Mile (RM 2-16)

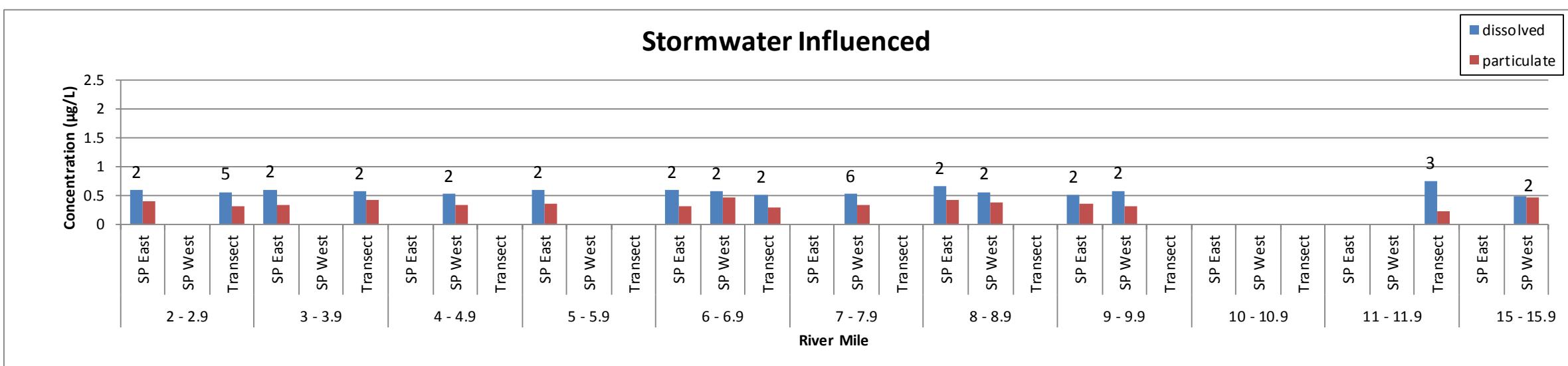
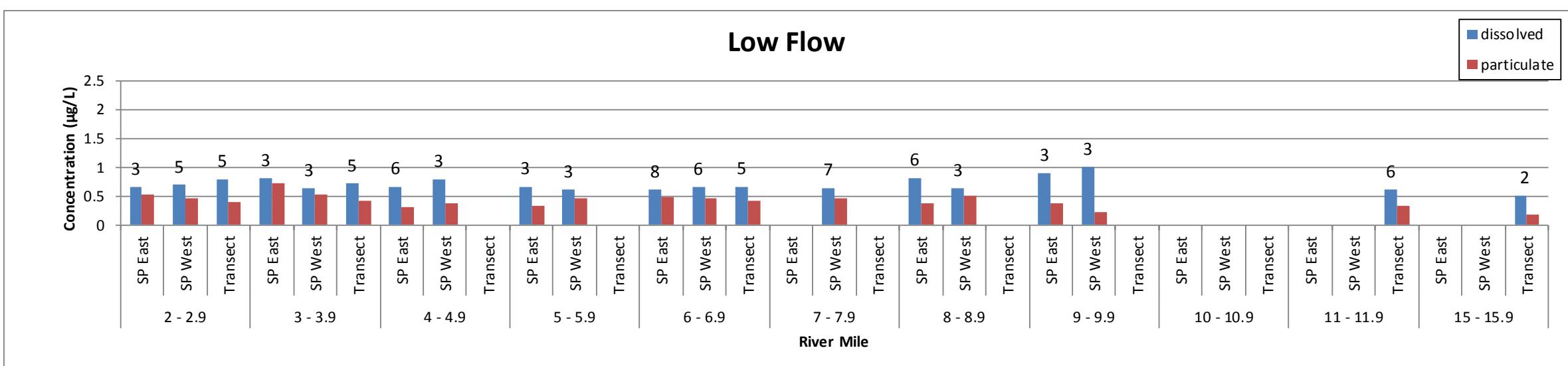
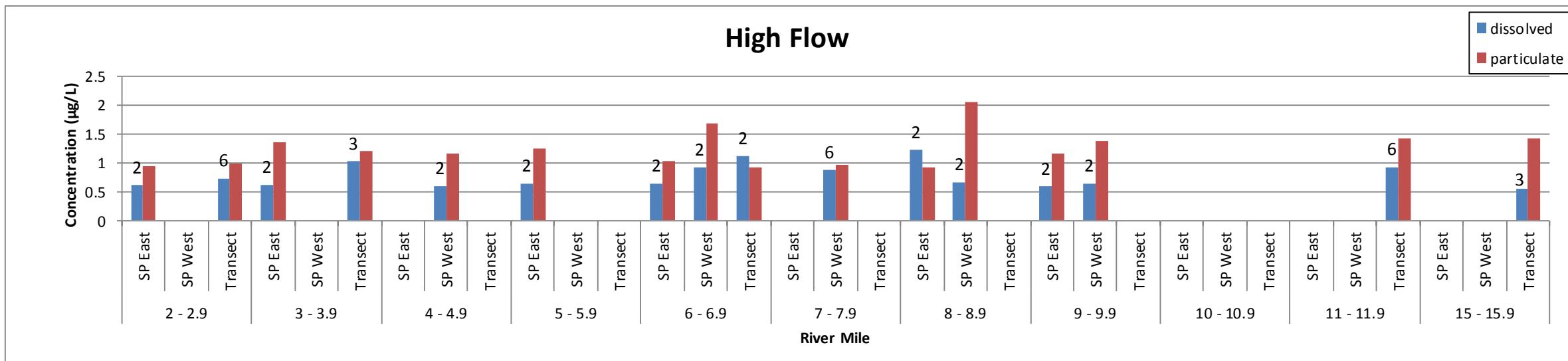


Figure 5.4-52
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Copper
Concentrations in Surface Water by Flow Event (RM 2-16)

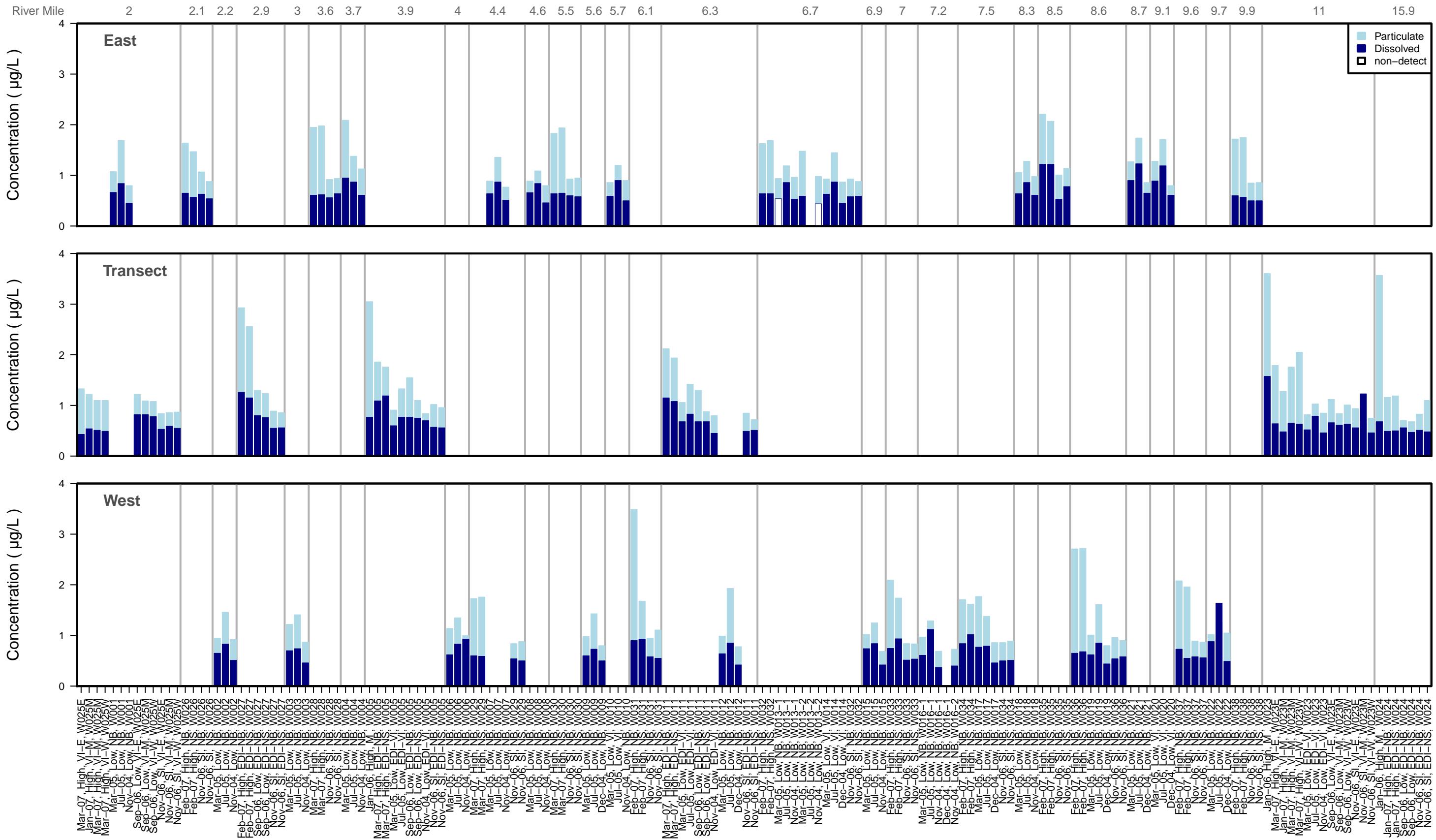


Figure 5.4-53
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Copper Concentrations in Surface Water, RM 2-16

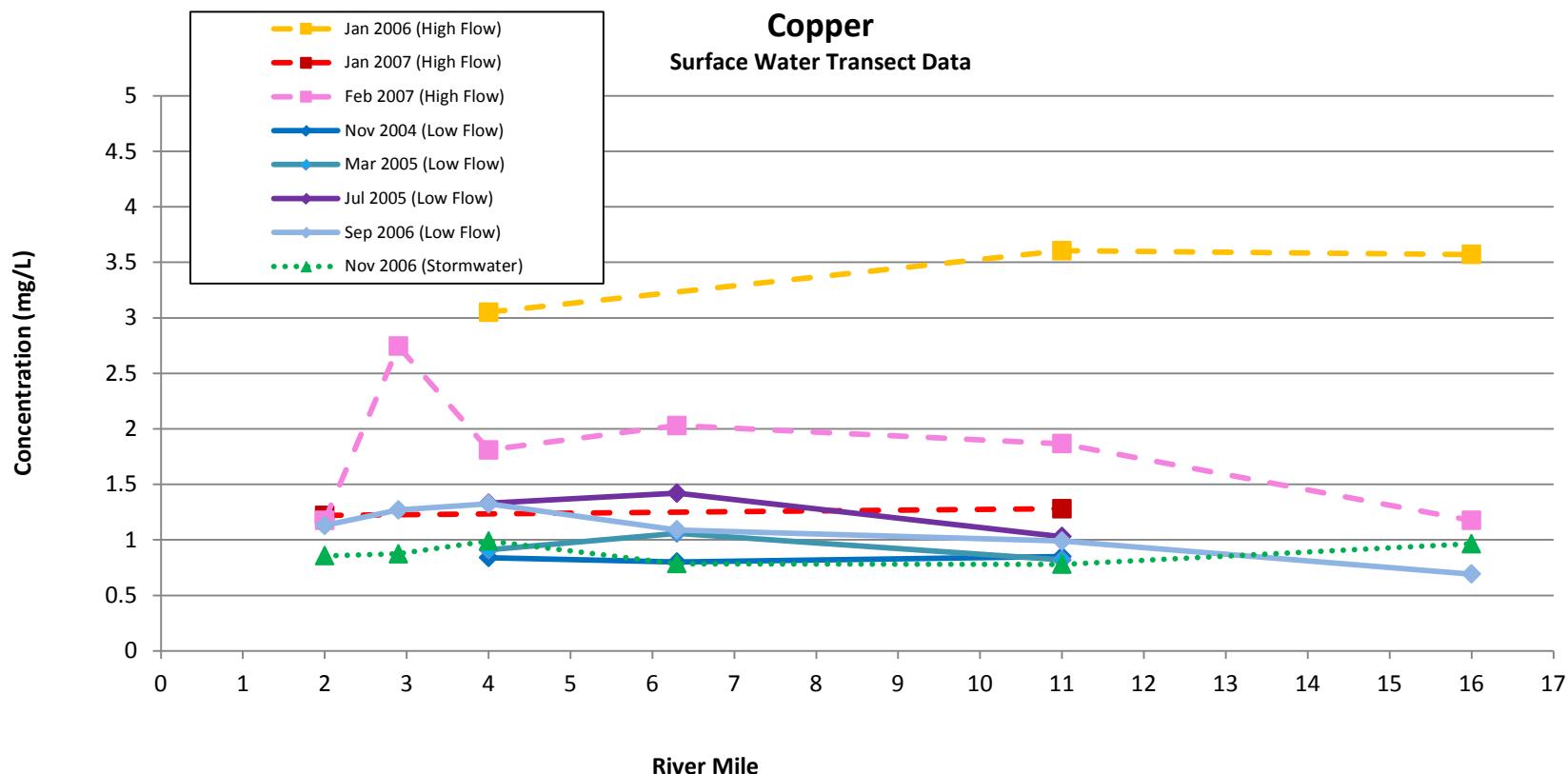


Figure 5.4-54
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Copper Concentrations in
Surface Water by River Mile (RM 2-16)

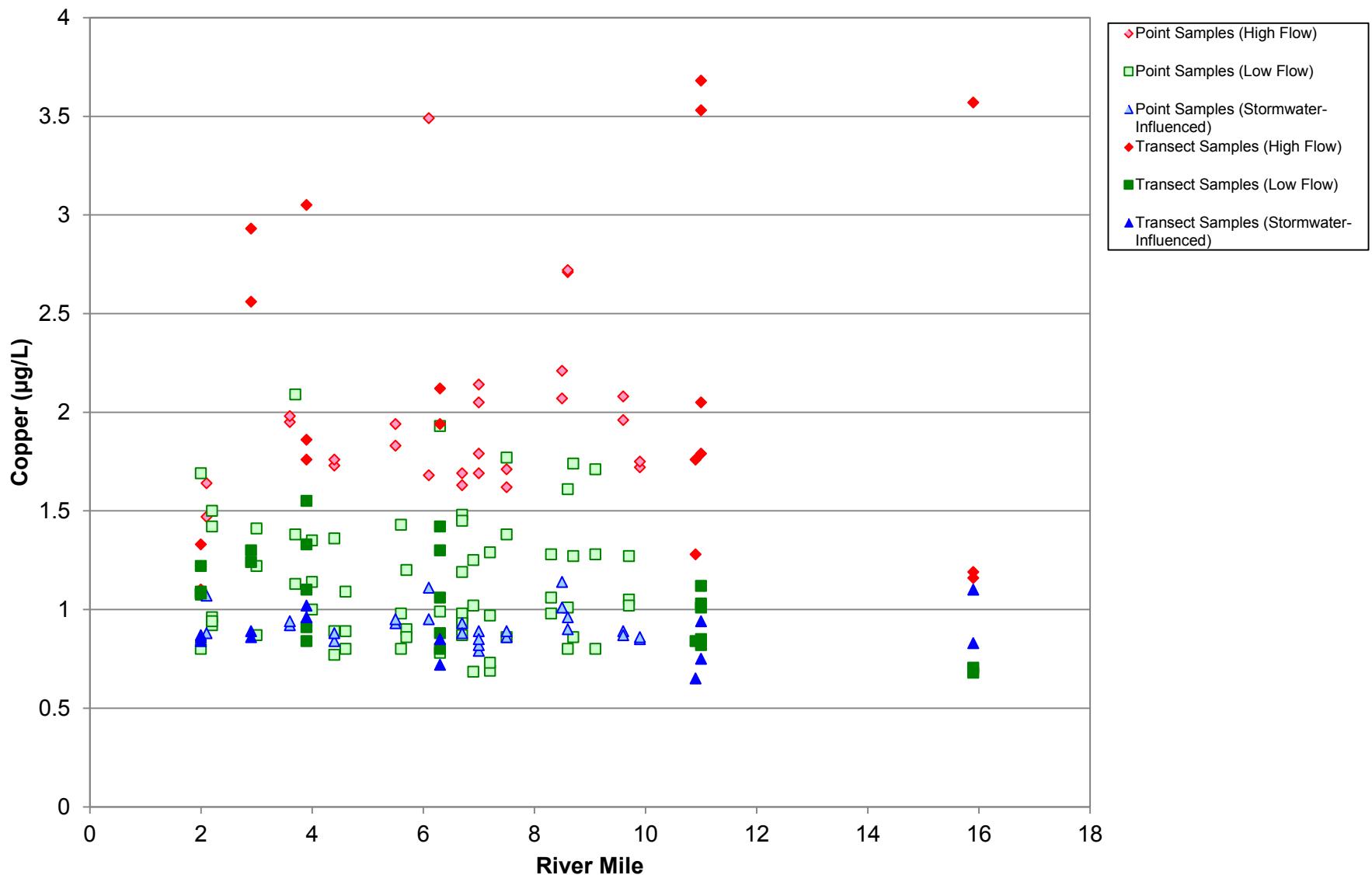


Figure 5.4-55
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Copper Concentrations in Surface Water by River Mile (RM 2-16)

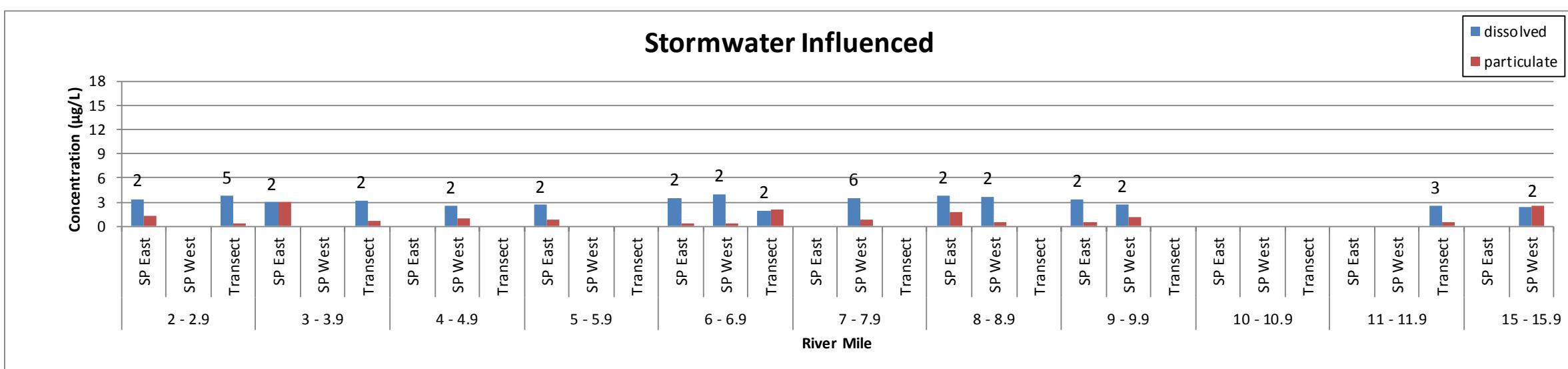
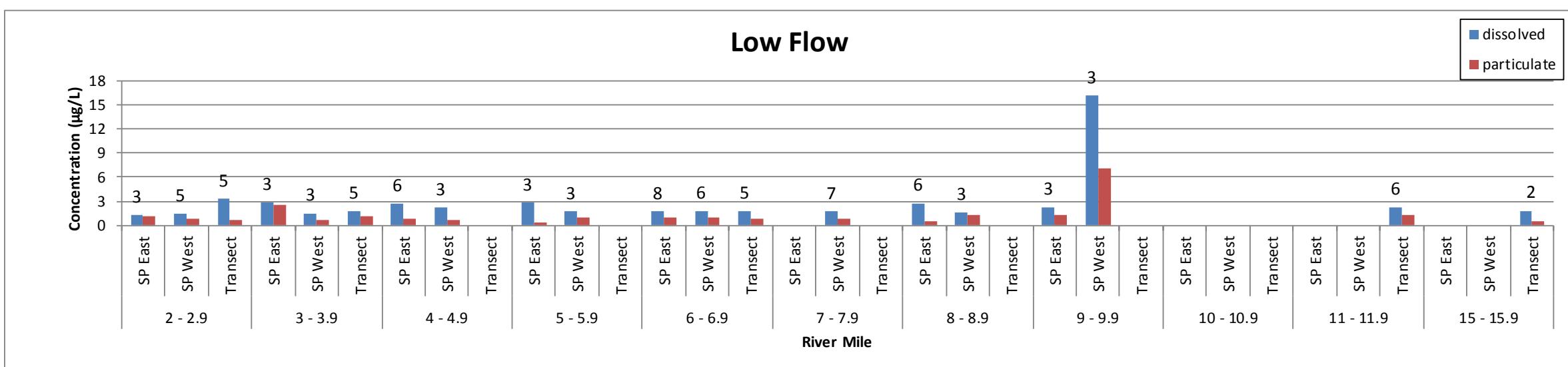
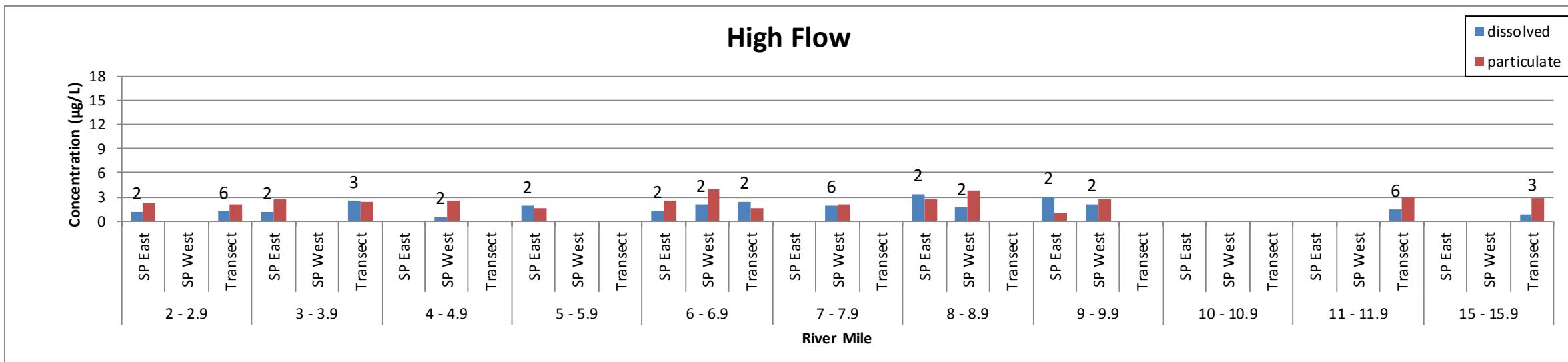


Figure 5.4-56
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Zinc
Concentrations in Surface Water by Flow Event (RM 2-16)

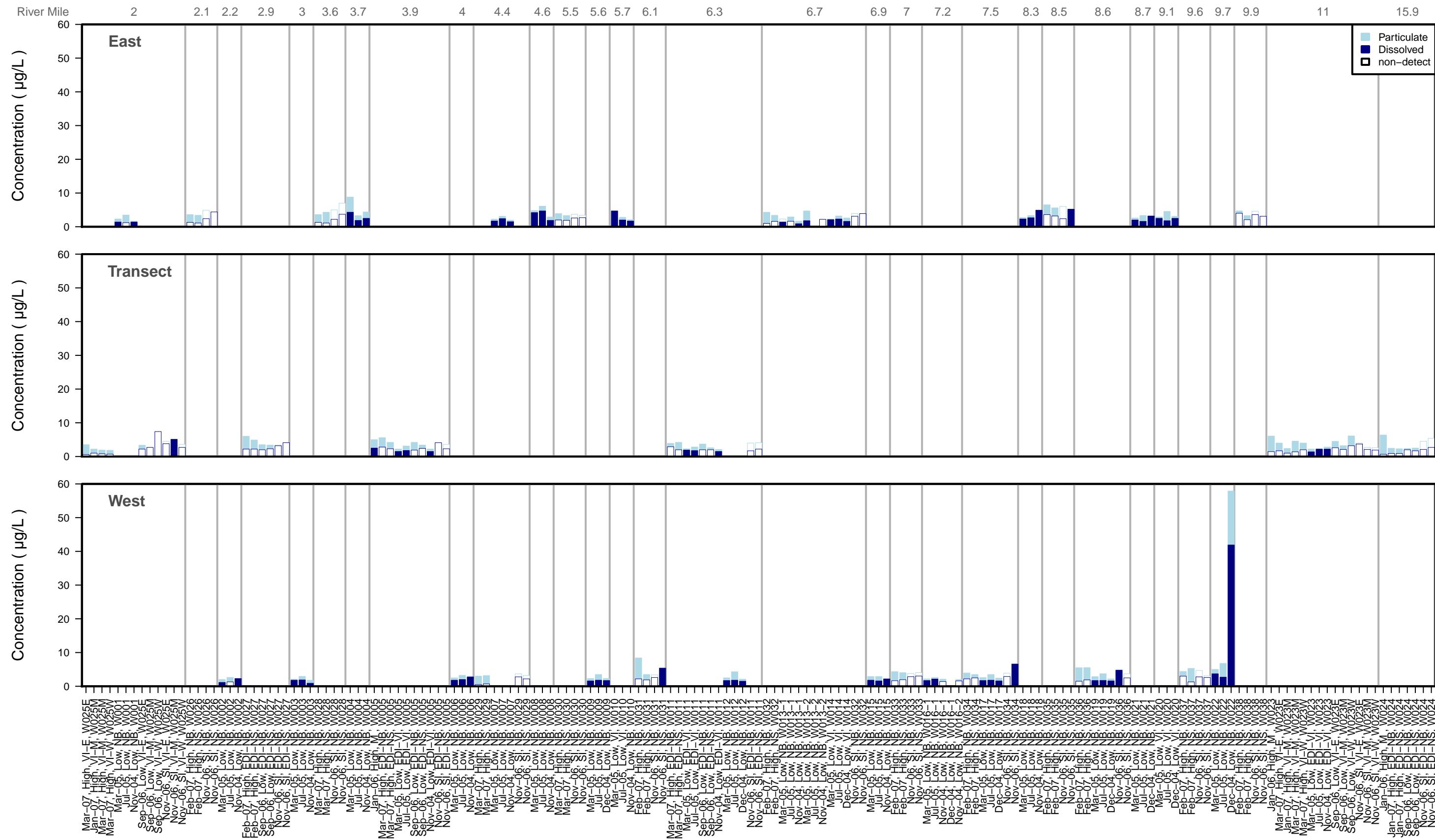


Figure 5.4-57a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Histogram by Channel Position of Zinc Concentrations in Surface Water, RM 2-16

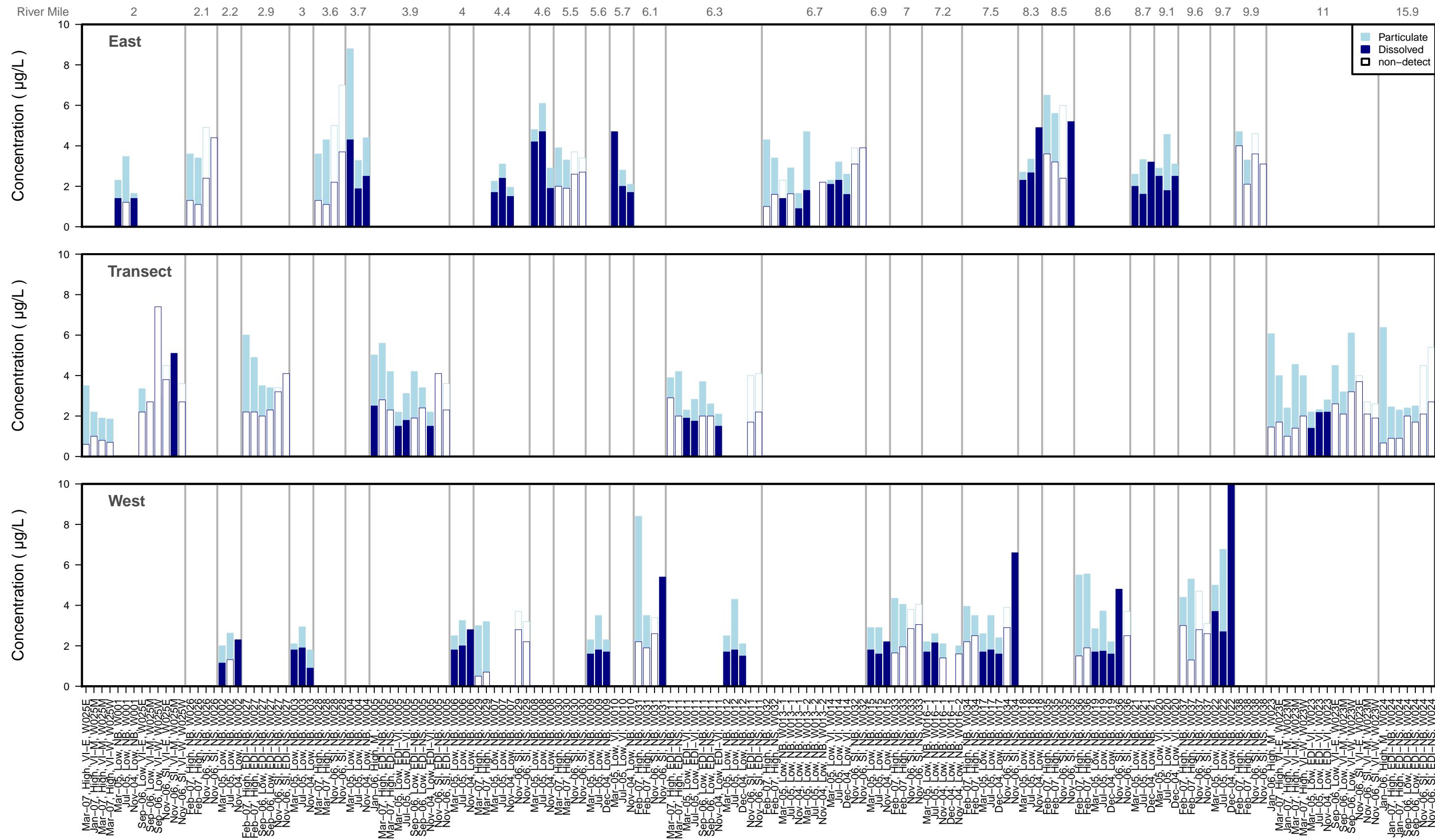


Figure 5.4– 57b
 Portland Harbor RI/FS
 Remedial Investigation Report

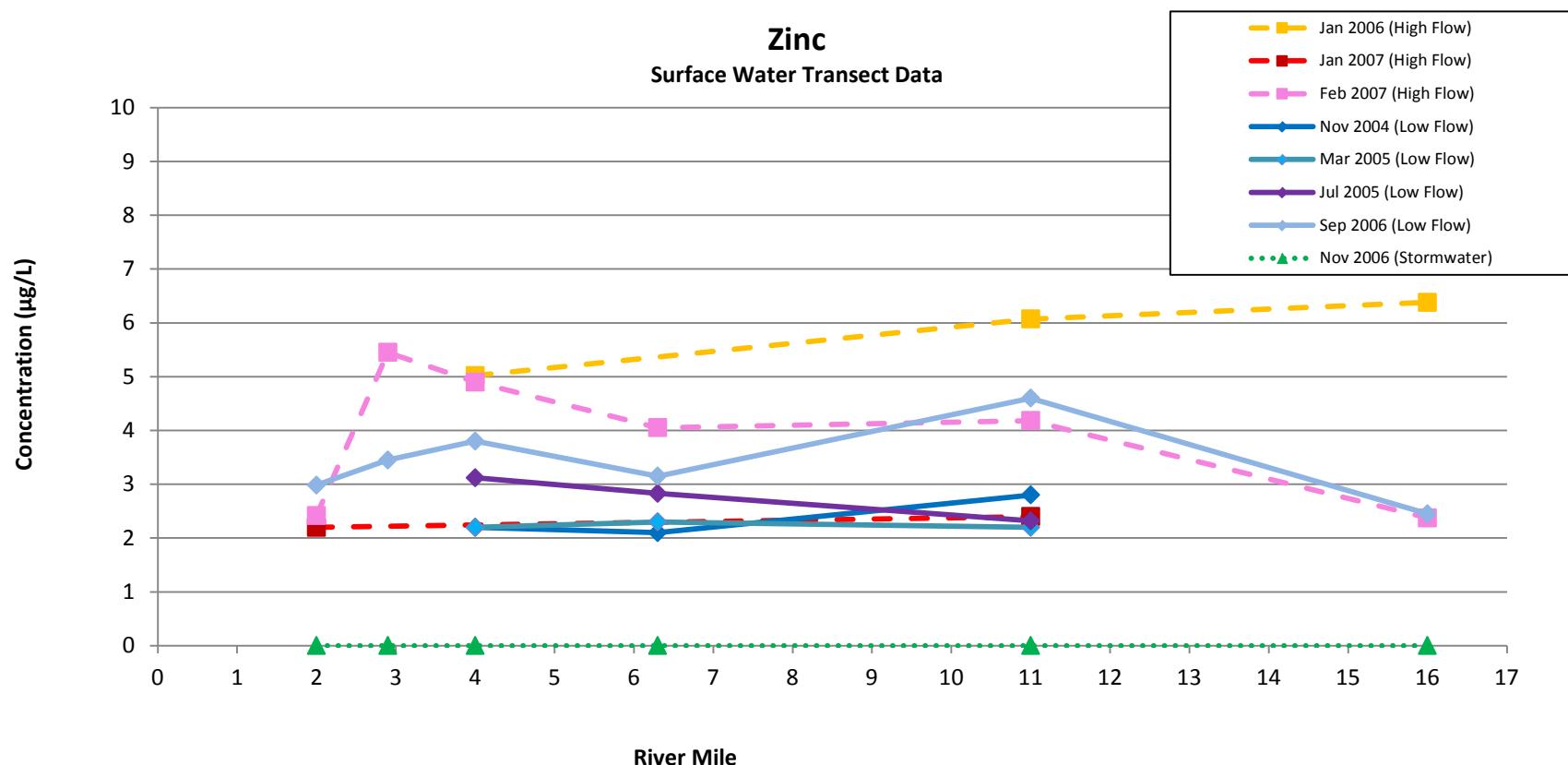


Figure 5.4-58
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect Zinc Concentrations in Surface Water by River Mile (RM 2–16)

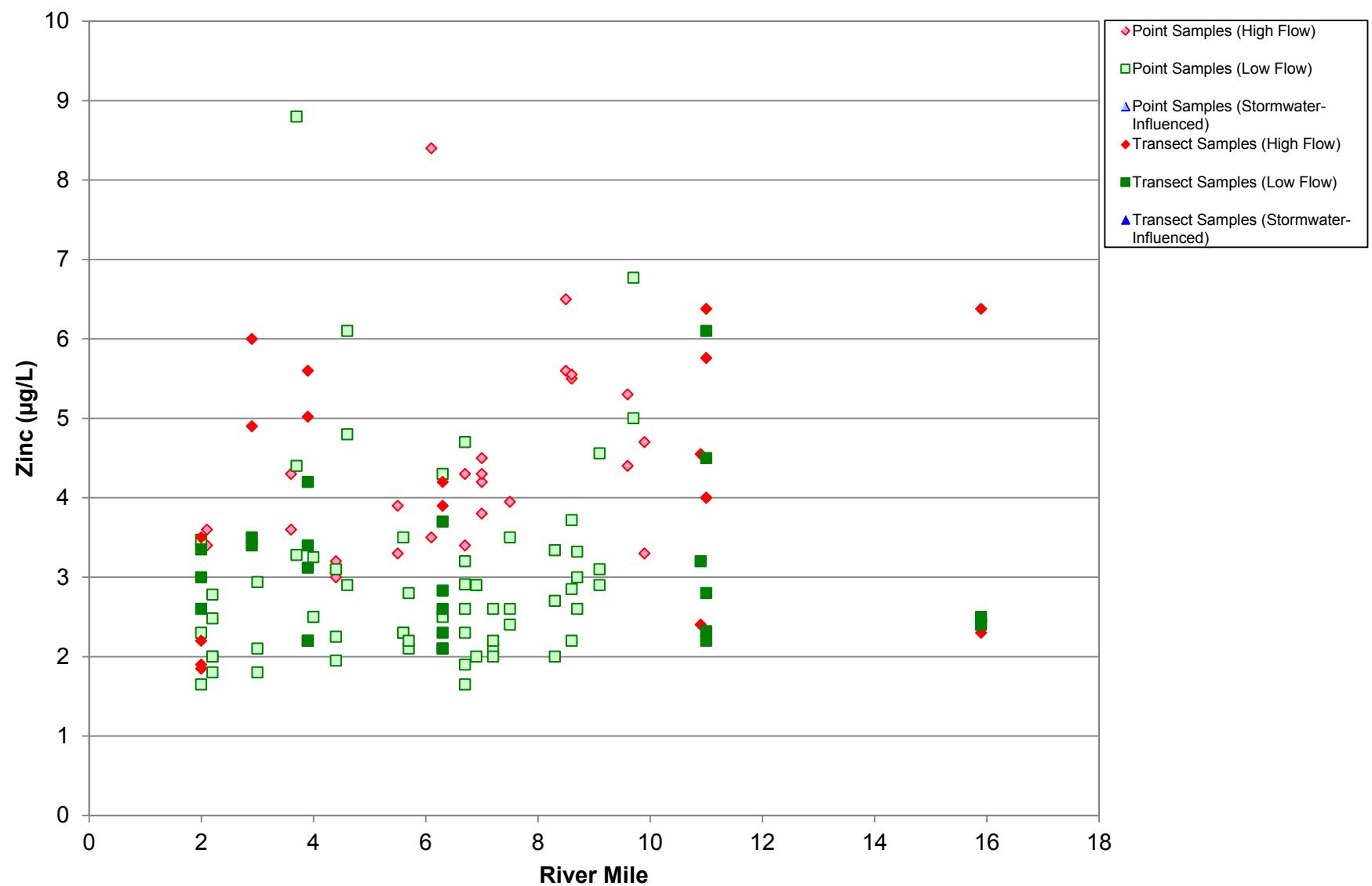


Figure 5.4-59
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Detected Zinc Concentrations in Surface Water by River Mile (RM 2-16)

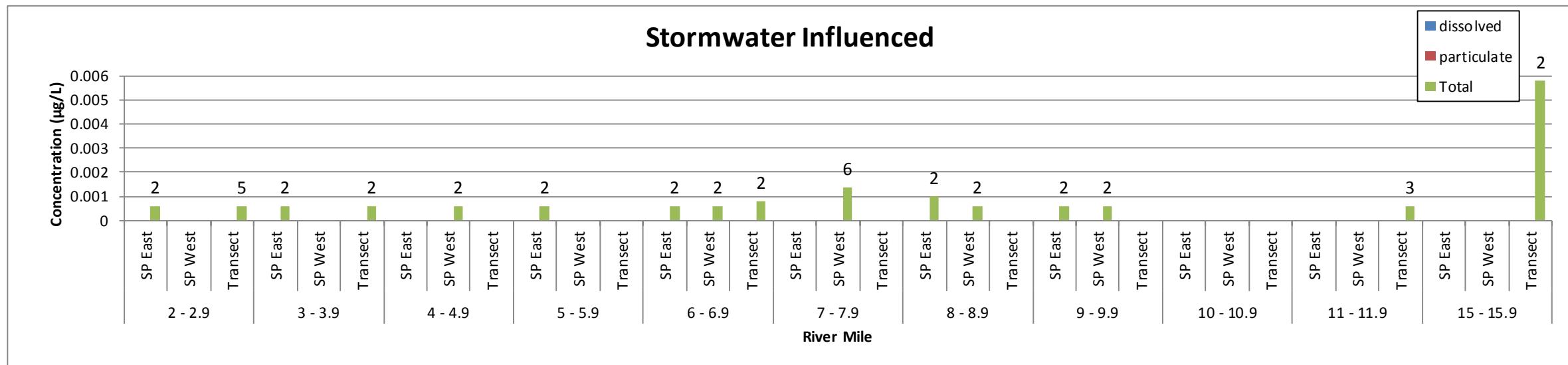
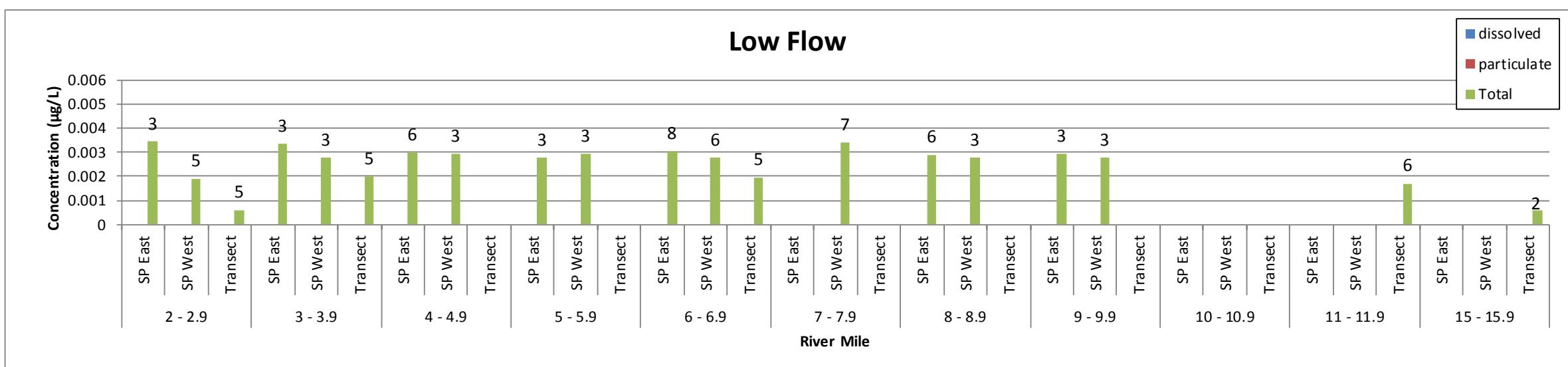
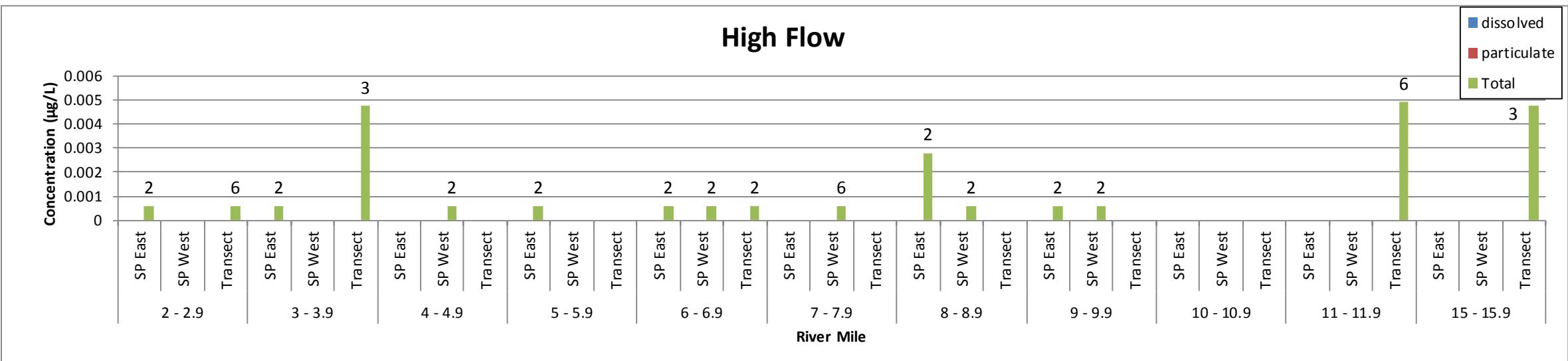


Figure 5.4-60
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point TBT
Concentrations in Surface Water by Flow Event (RM 2-16)

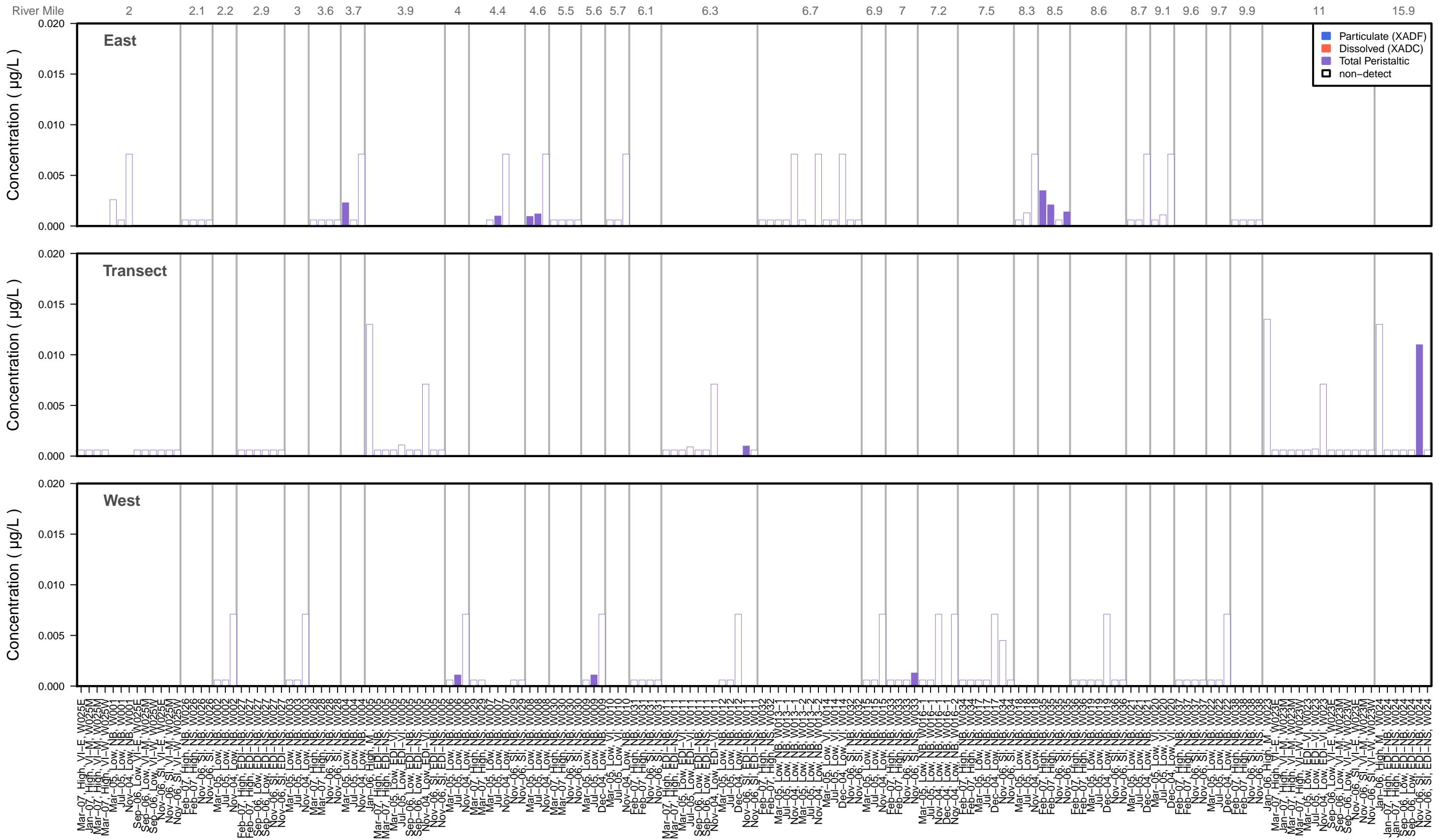


Figure 5.4-61
Portland Harbor RI/FS
Remedial Investigation Report
Histogram by Channel Position of Tributyltin Ion Concentrations in Surface Water, RM 2-16

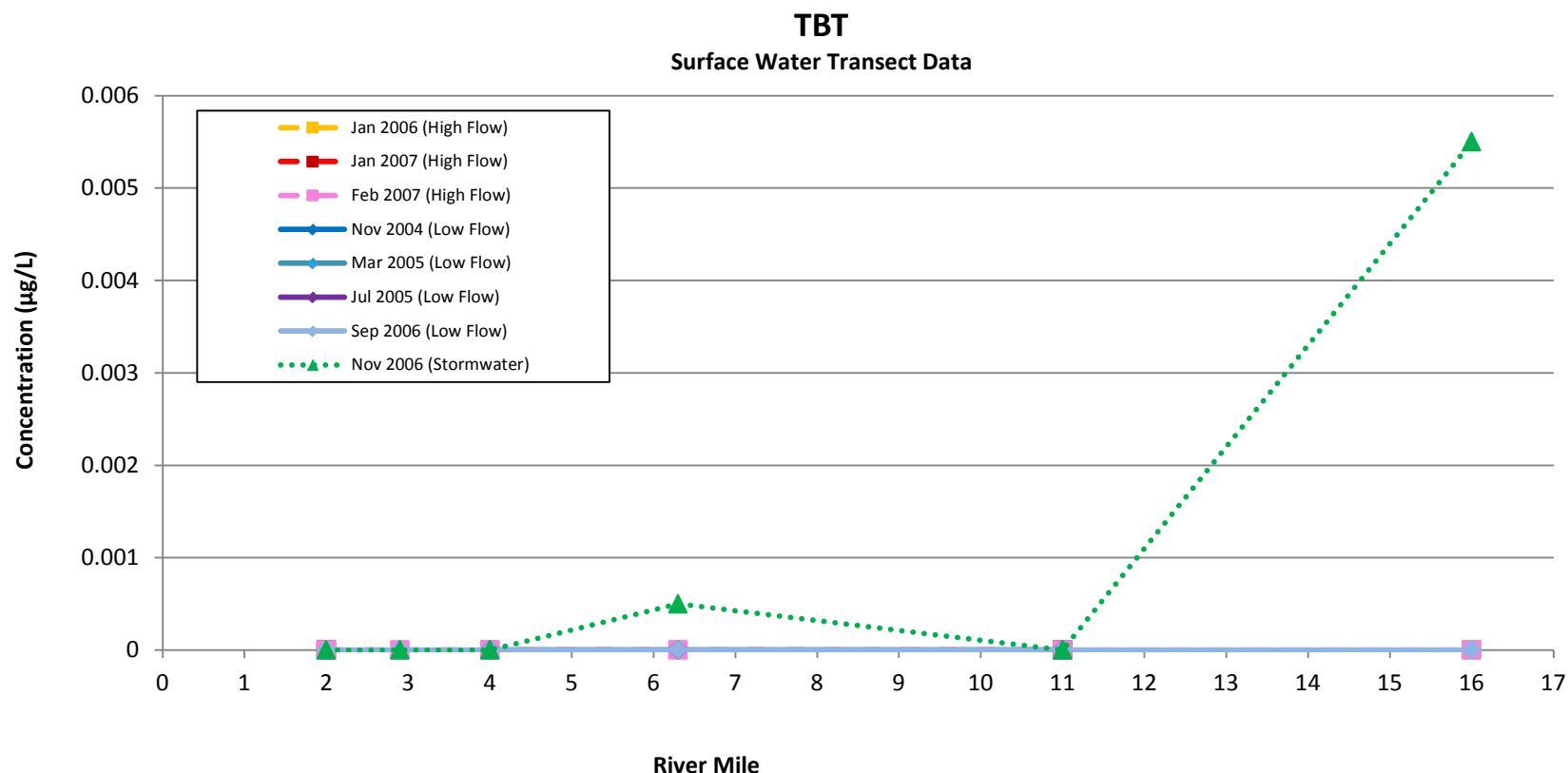


Figure 5.4-62
Portland Harbor RI/FS
Remedial Investigation Report
Line Plot of Transect TBT Concentrations in Surface Water by River Mile (RM 2–16)

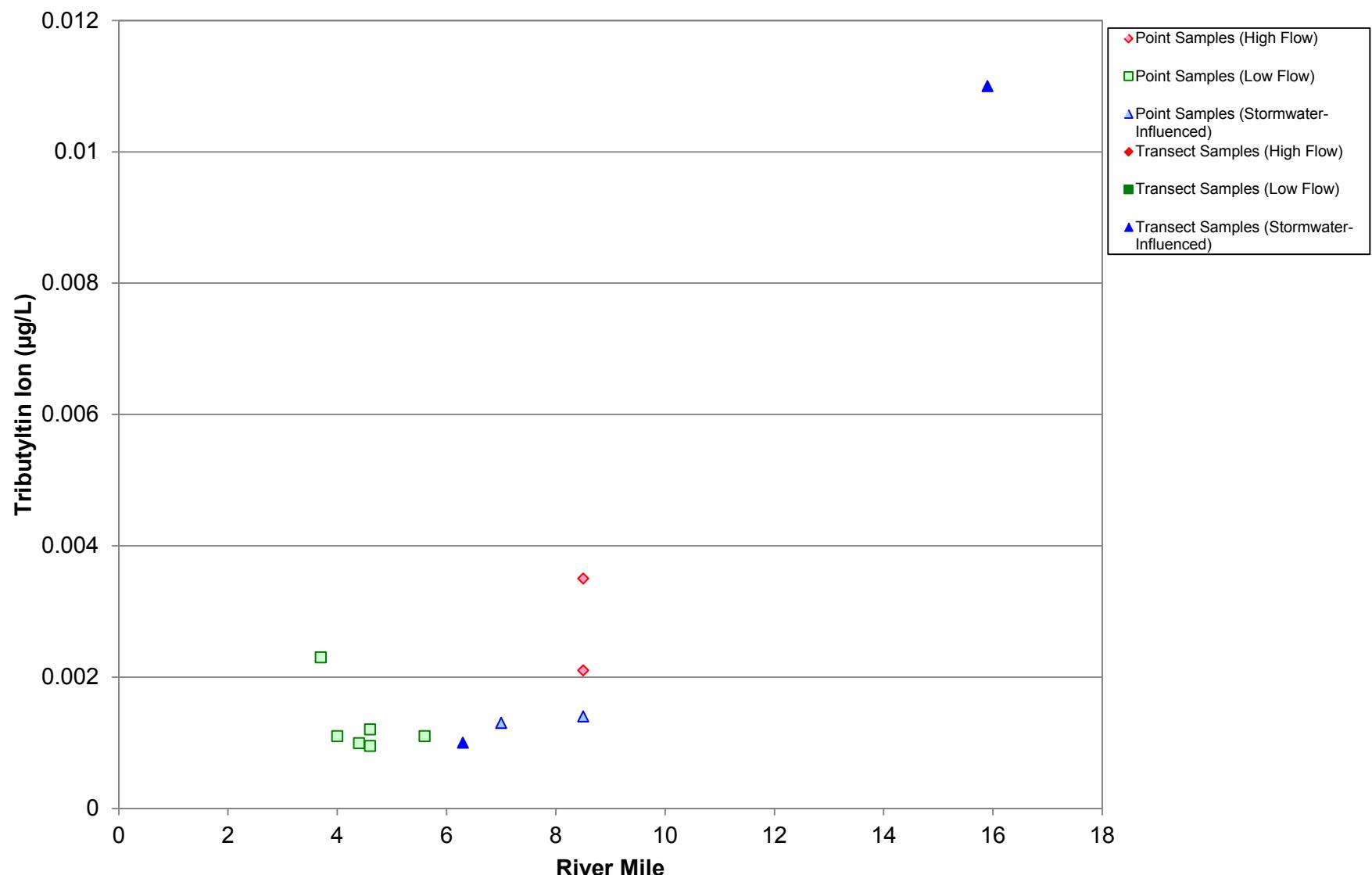


Figure 5.4-63
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Detected TBT Concentrations in
Surface Water by River Mile (RM 2-16)

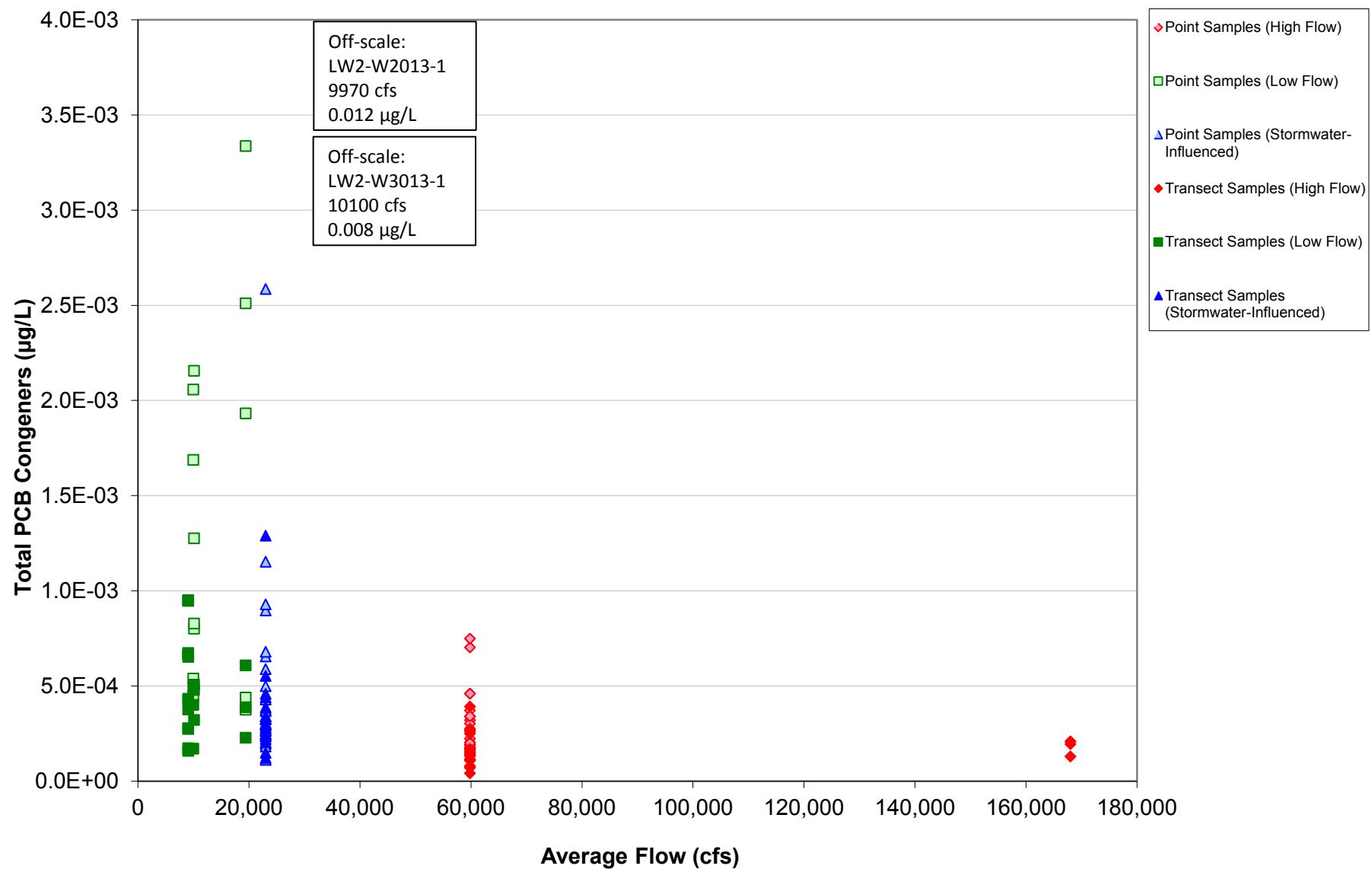


Figure 5.4-64
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total PCB Congener Concentrations in
 Surface Water vs. Flow Rate, RM 2-16 (XAD)

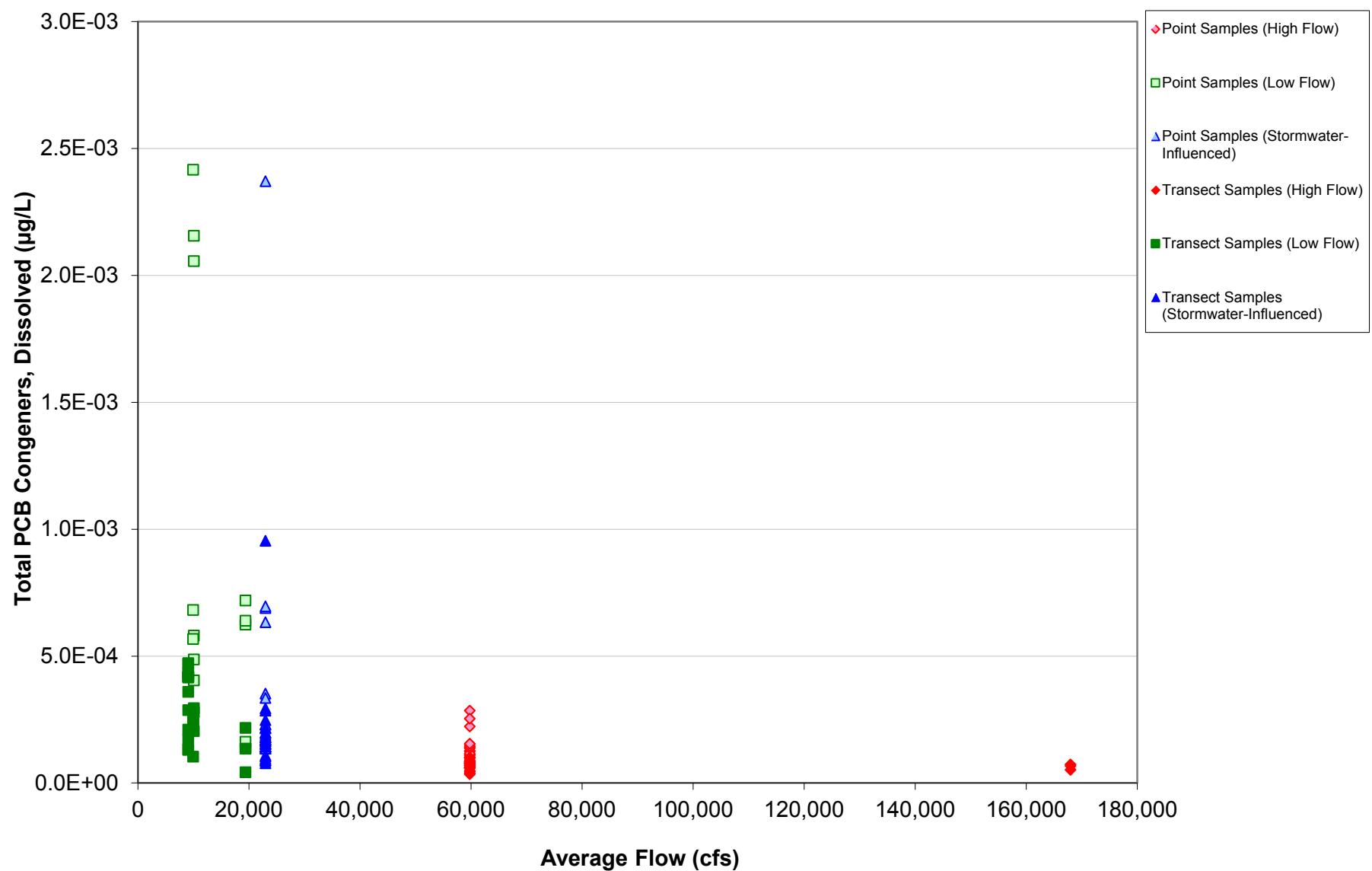


Figure 5.4-65
Portland Harbor RI/FS
Remedial Investigation Report

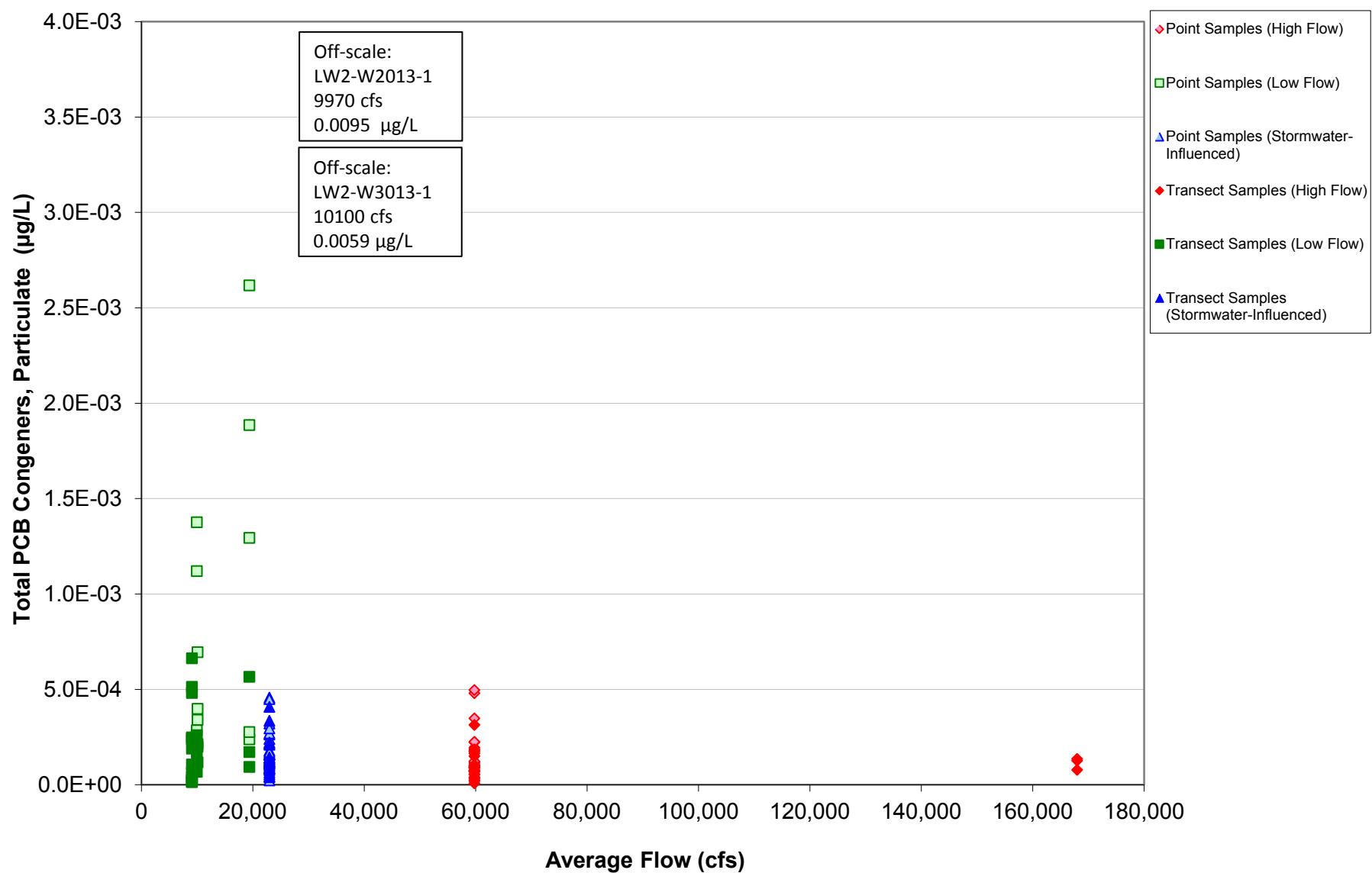


Figure 5.4-66
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total PCB Congener Particulate Concentrations in Surface Water vs. Flow Rate, RM 2-16 (XAD)

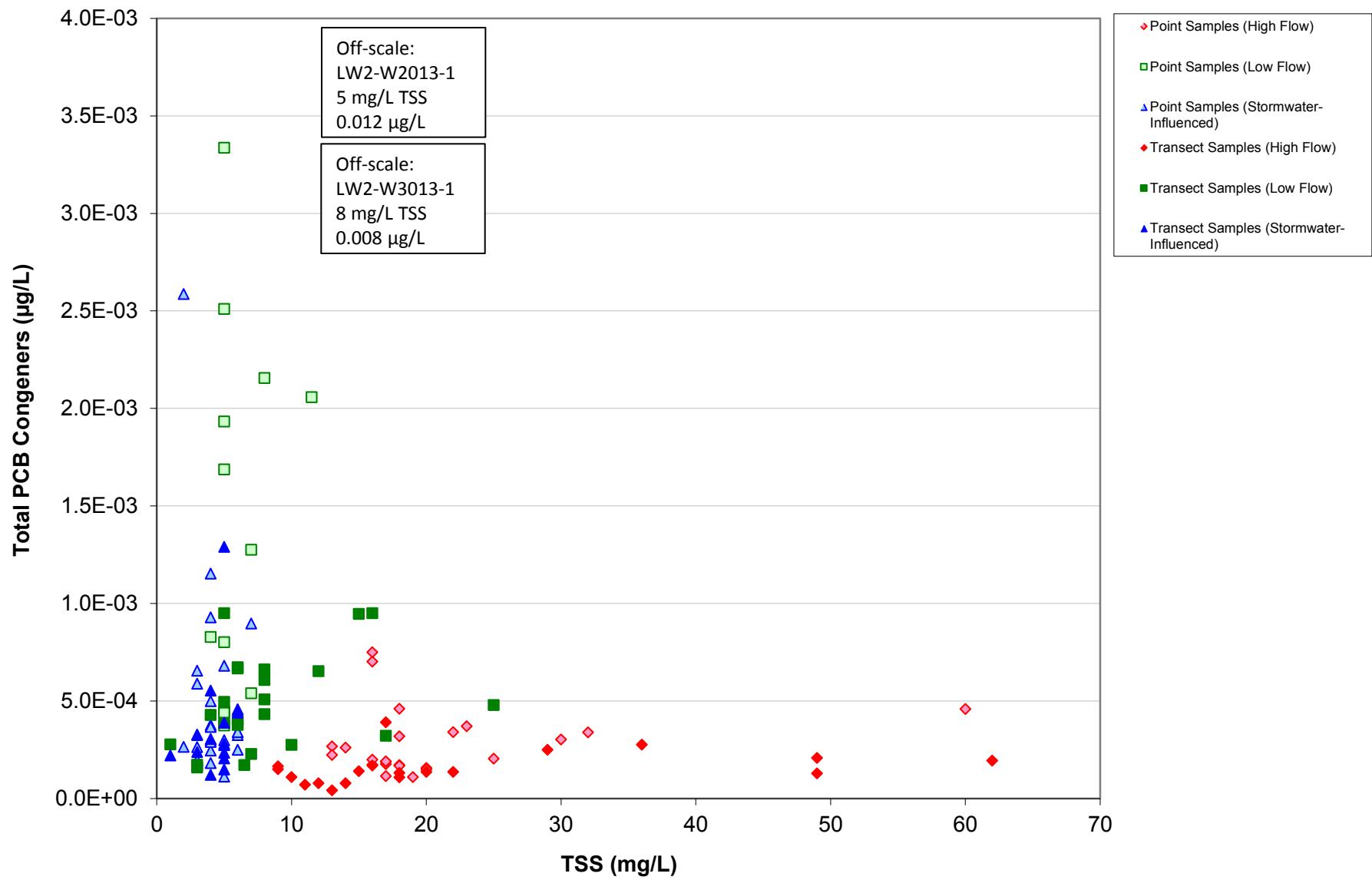


Figure 5.4-67
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total PCB Congener Concentrations vs. Total
 Suspended Solids Concentrations in Surface Water, RM 2-16 (XAD)

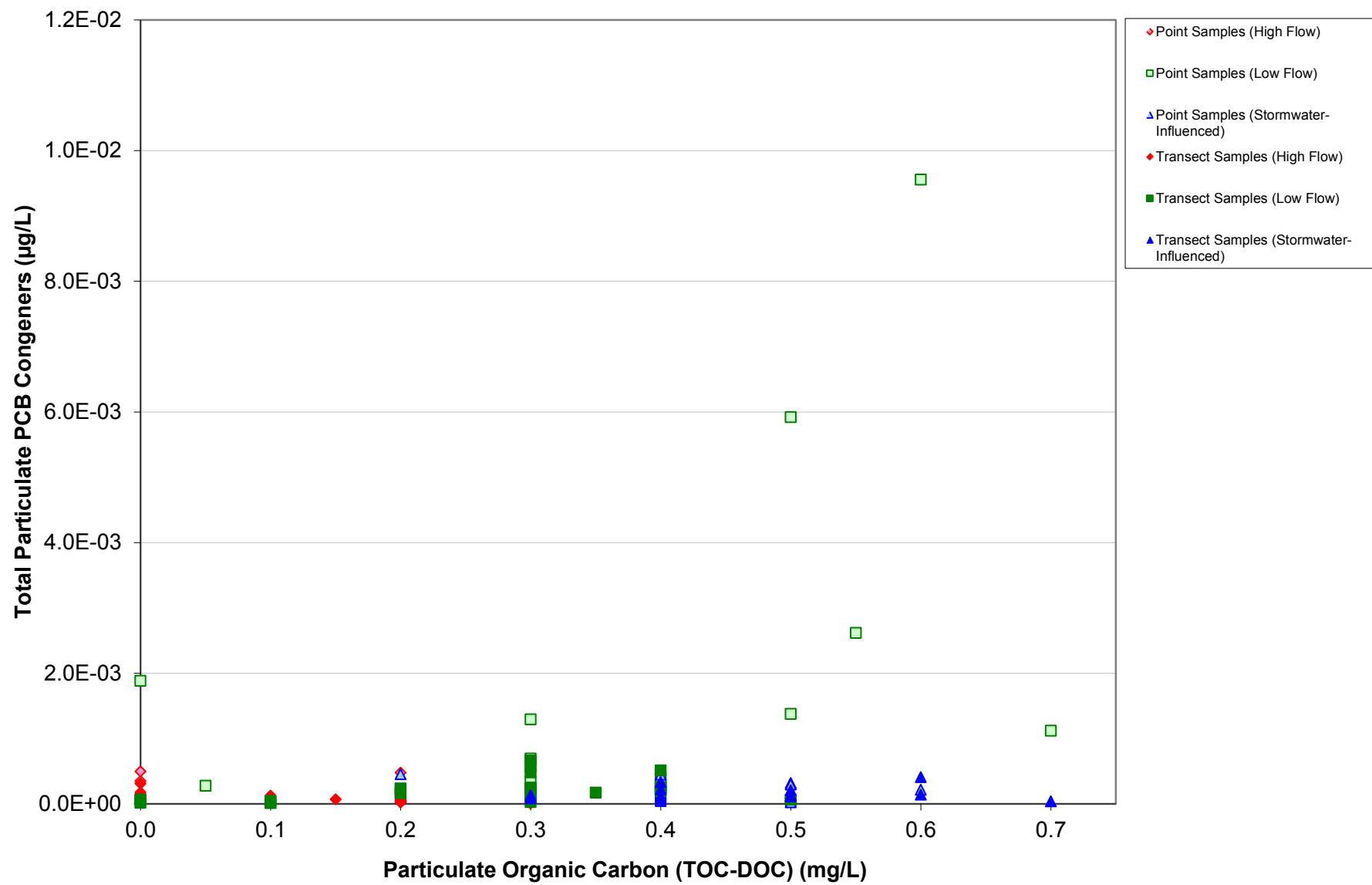


Figure 5.4-68a
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCB Congener Particulate Concentrations vs. Particulate Organic Carbon Concentrations in Surface Water, RM 2–16 (XAD)

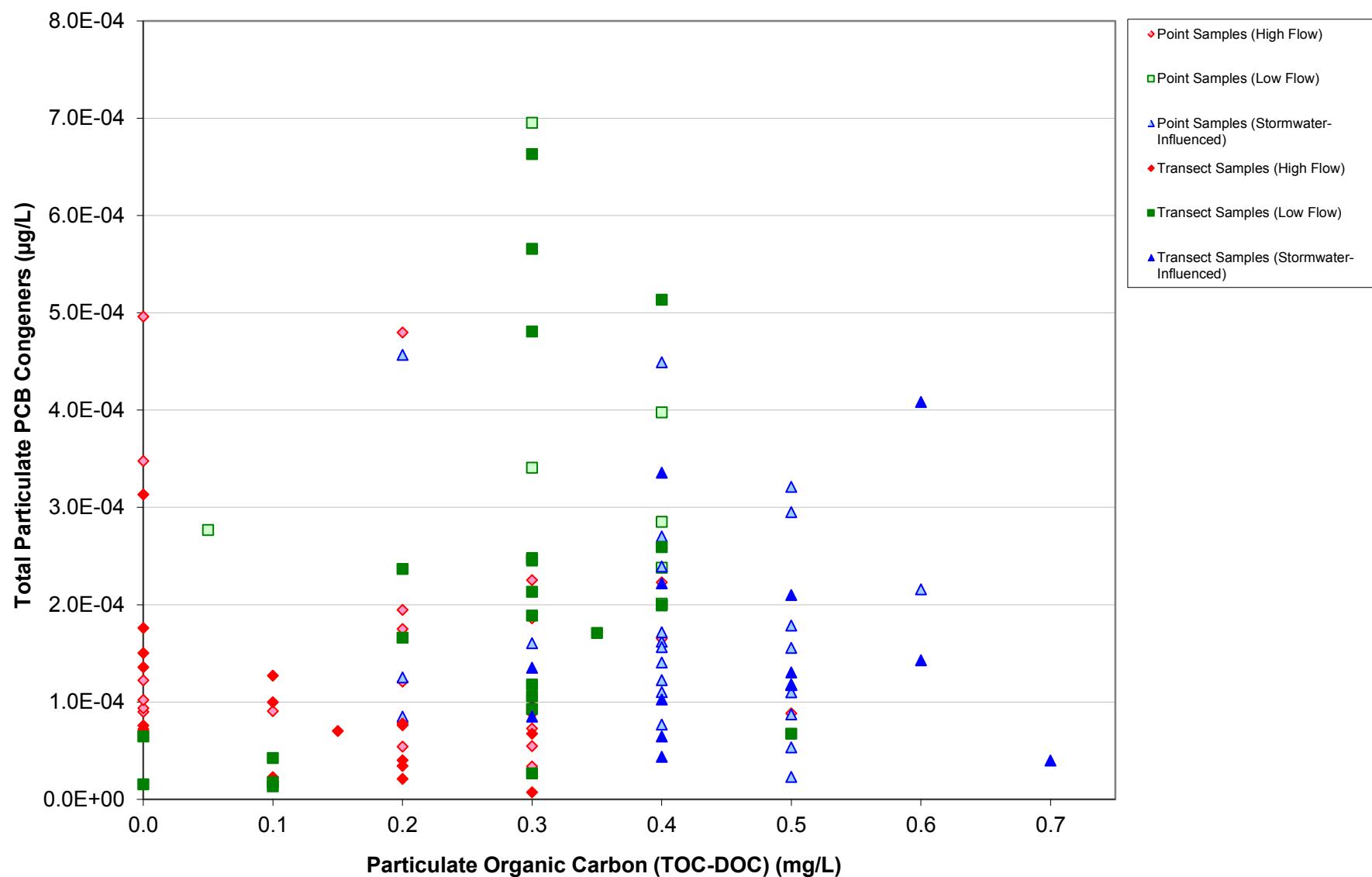


Figure 5.4-68b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total PCB Congener Particulate Concentrations vs. Particulate Organic Carbon Concentrations in Surface Water, RM 2–16 (XAD), Scale Zoom

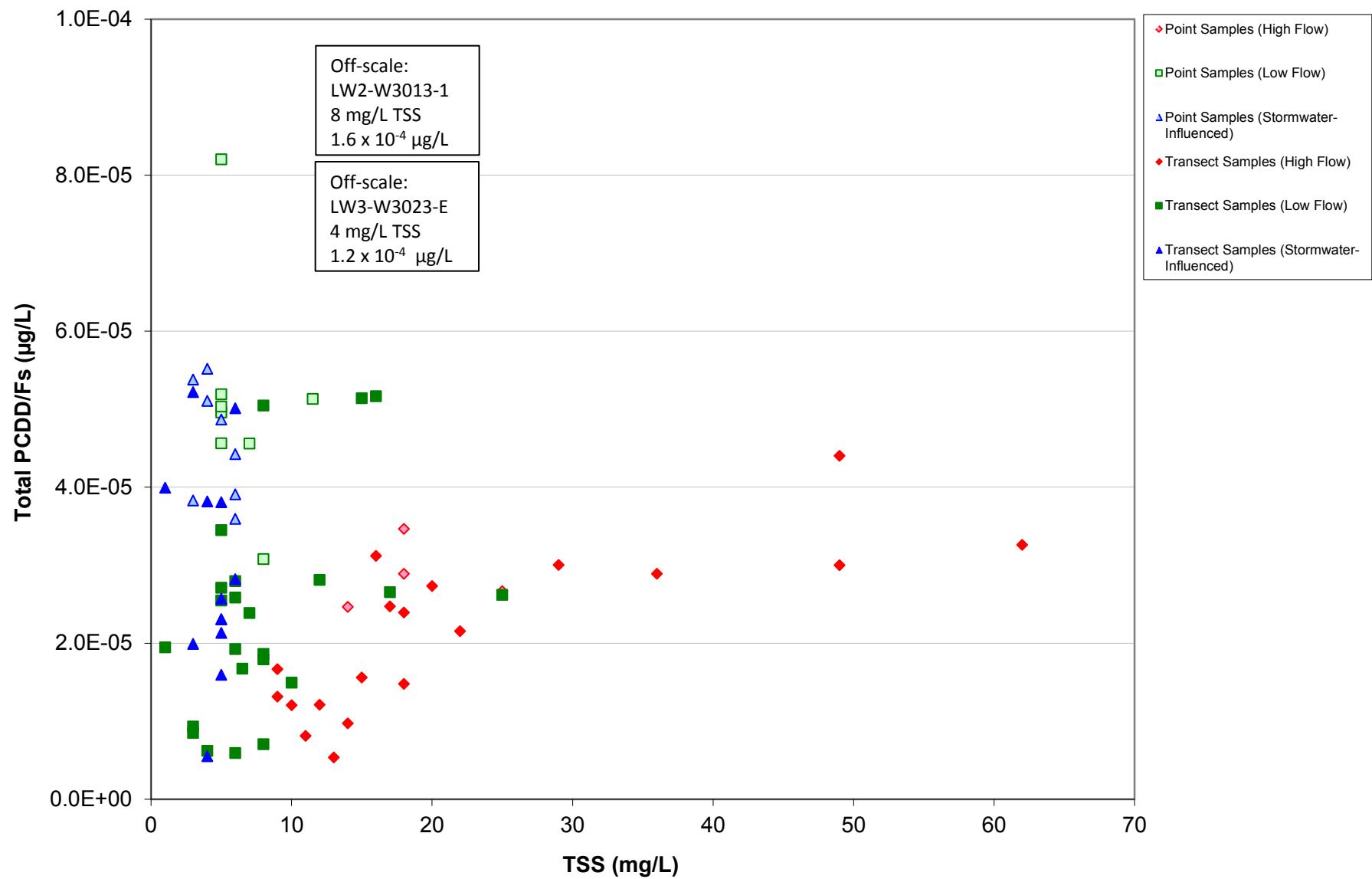


Figure 5.4-69
Portland Harbor RI/FS
Remedial Investigation Report

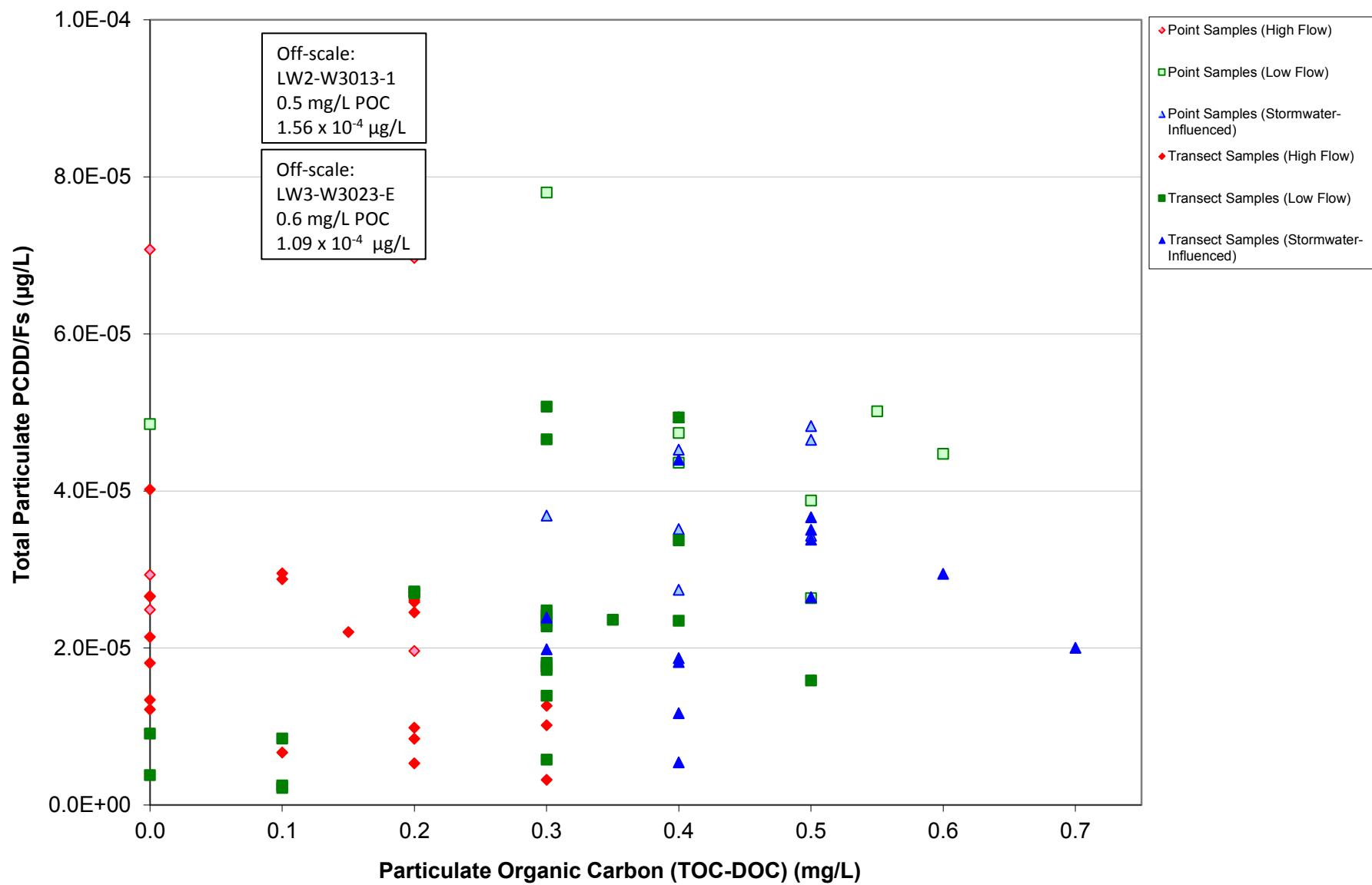


Figure 5.4-70
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCDD/F Particulate Concentrations vs. Particulate Organic Carbon Concentrations in Surface Water, RM 2-16 (XAD)

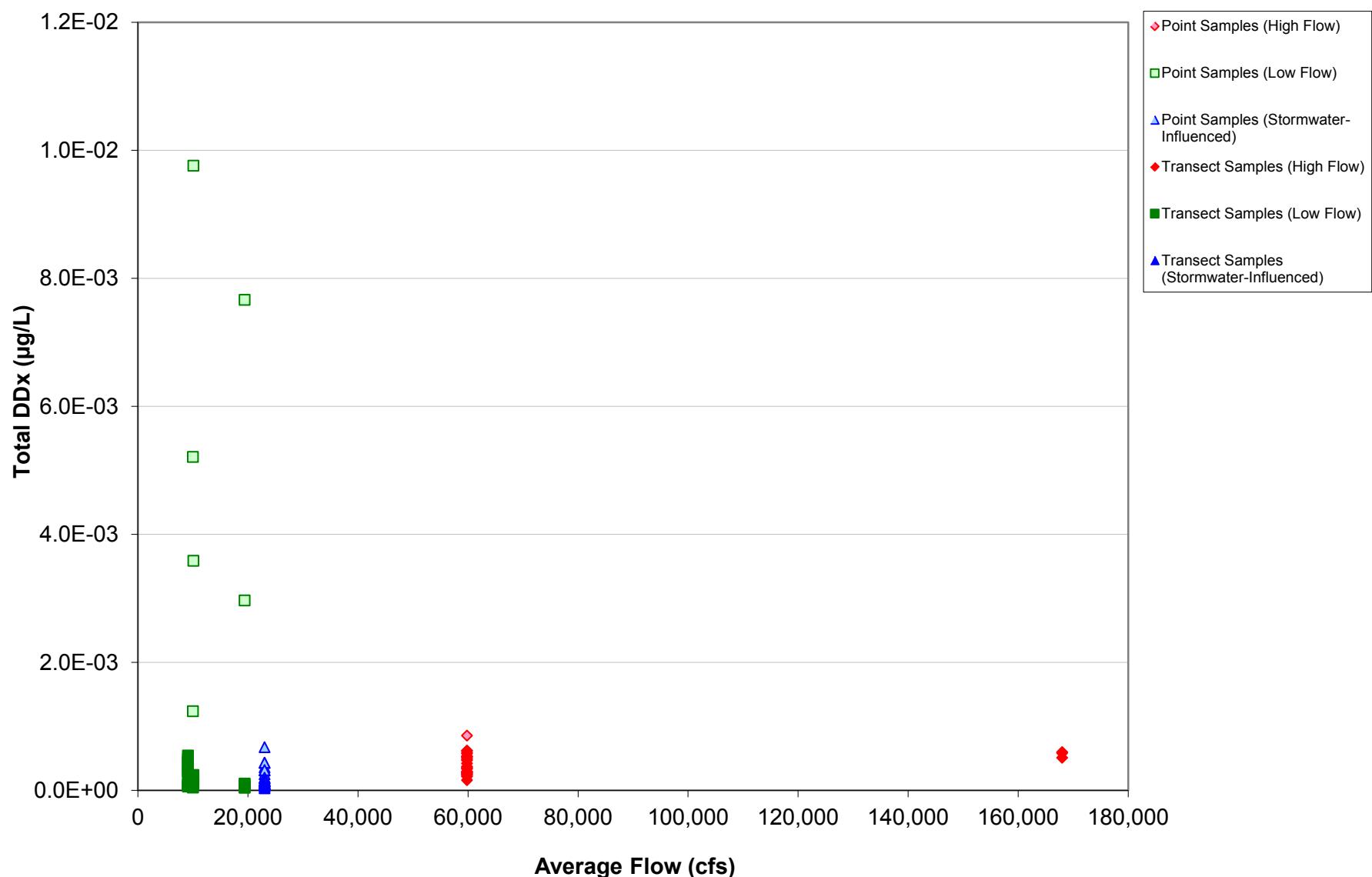


Figure 5.4-71a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total DDx Concentrations in Surface Water vs.
 Flow Rate, RM 2–16 (XAD)

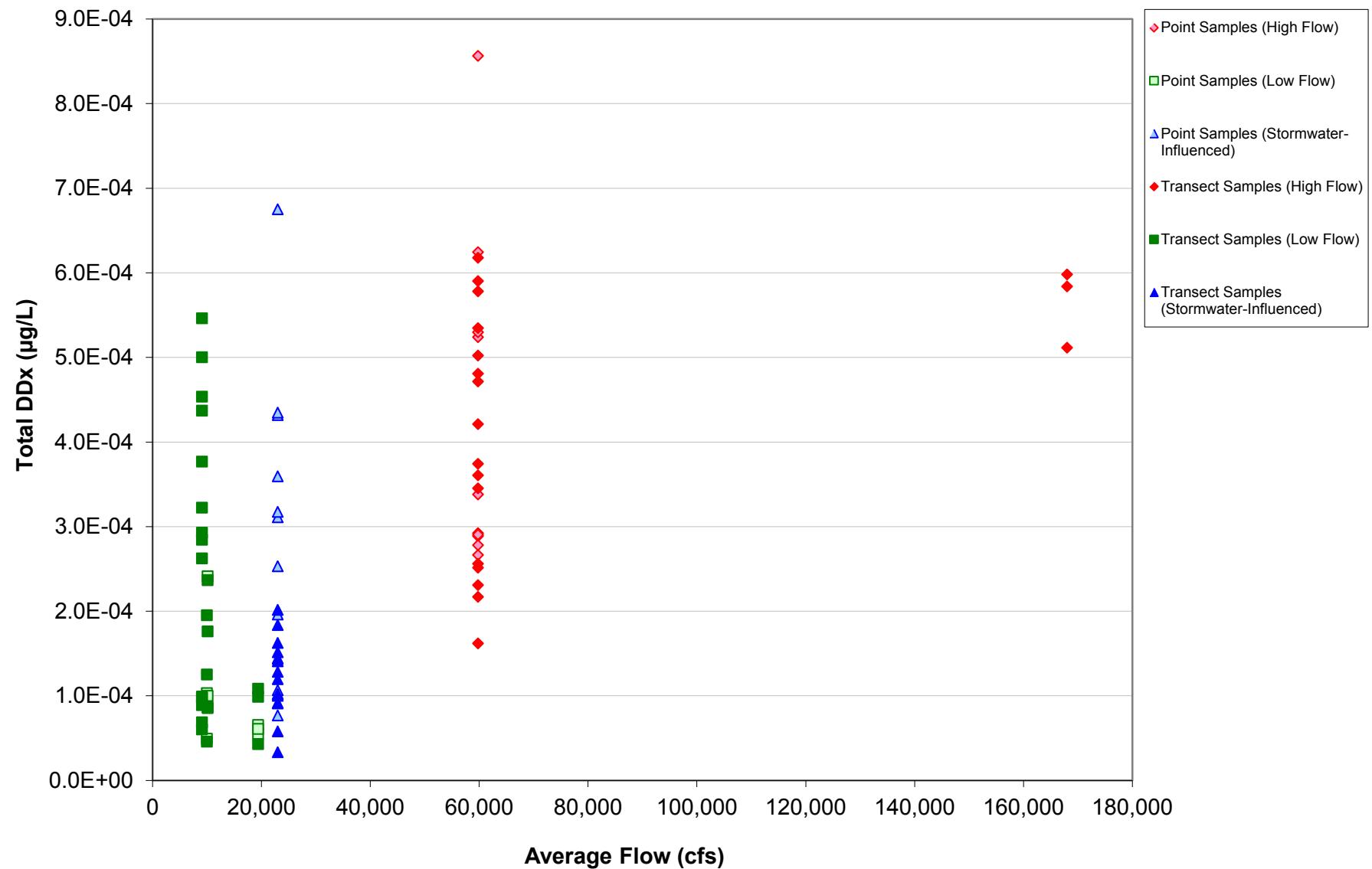


Figure 5.4-71b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total DDx Concentrations in Surface Water vs.
 Flow Rate, RM 2-16 (XAD), Scale Zoom

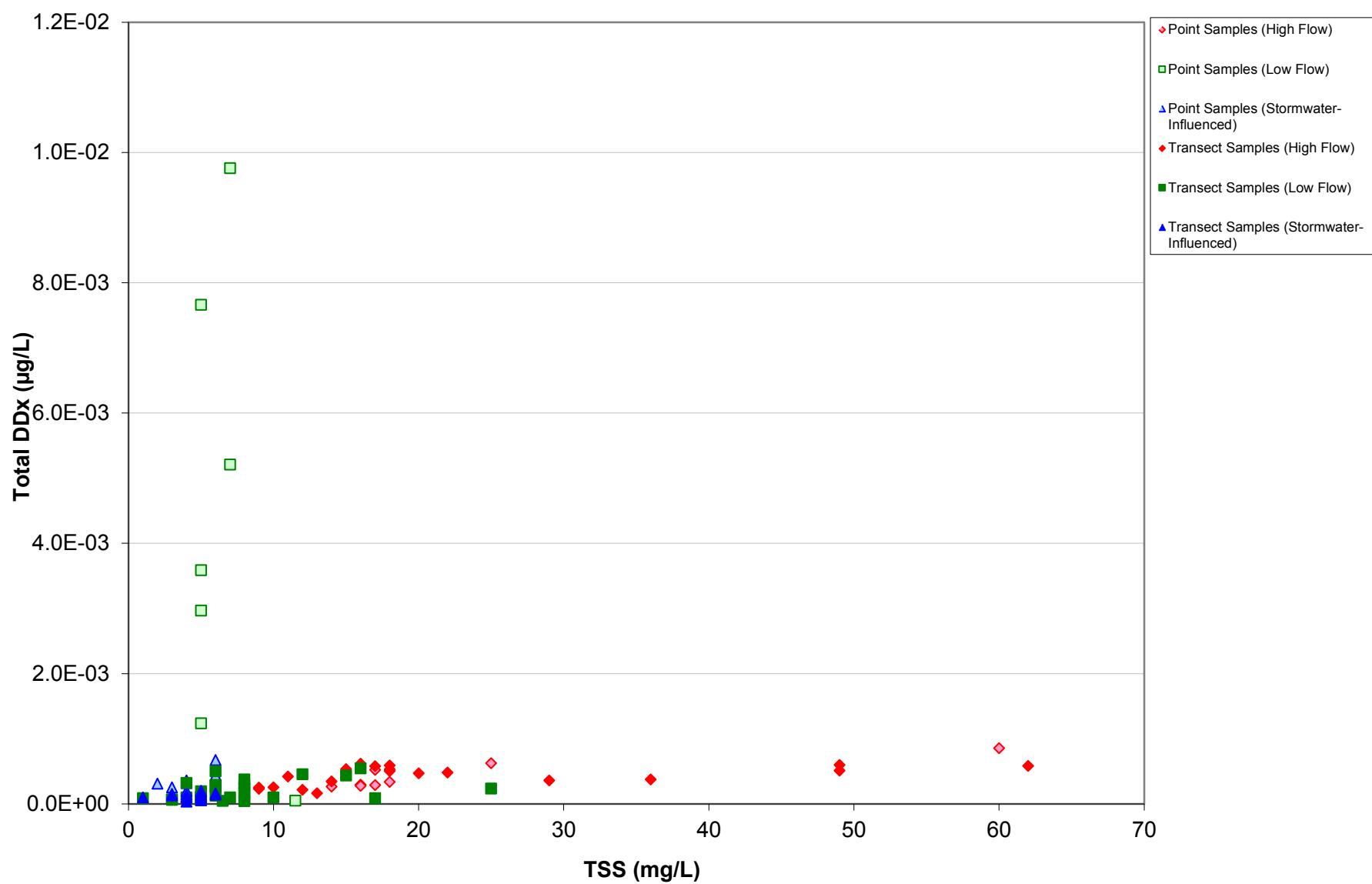


Figure 5.4-72a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total DDx Concentrations vs. Total Suspended
 Solids Concentrations in Surface Water, RM 2–16 (XAD)

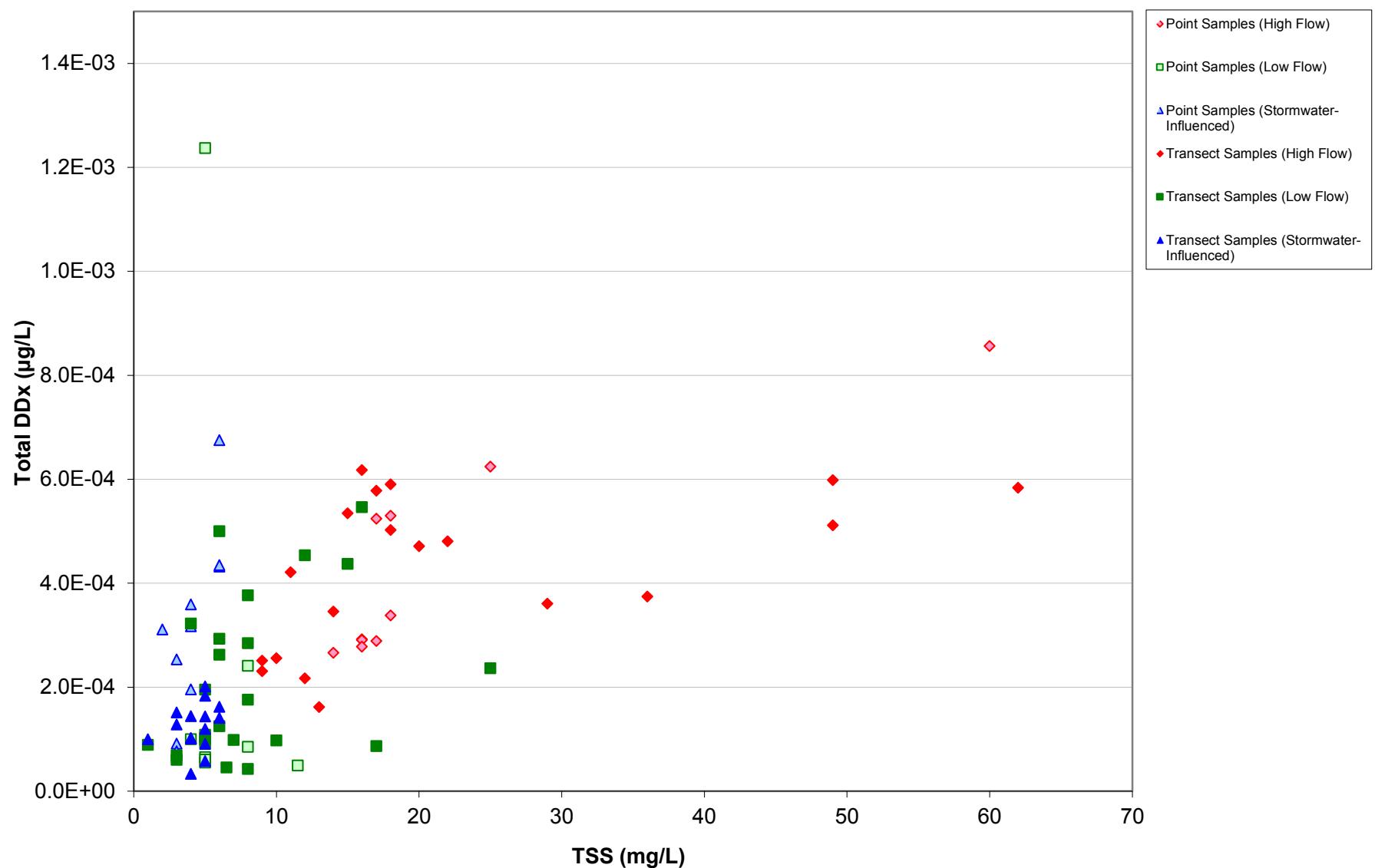


Figure 5.4-72b
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDx Concentrations vs. Total Suspended Solids
Concentrations in Surface Water, RM 2-16 (XAD), Scale Zoom

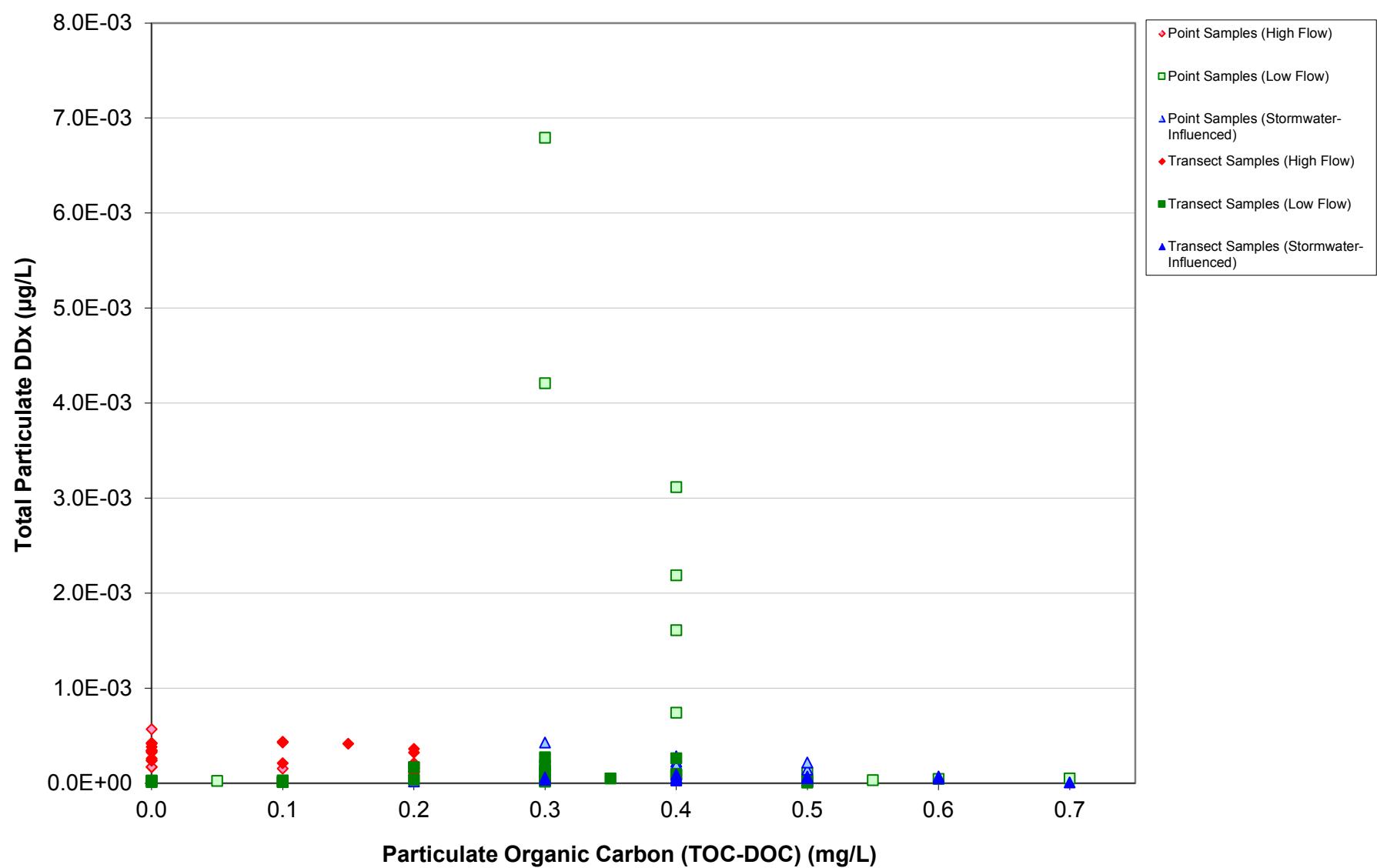


Figure 5.4-73a
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDx Particulate Concentrations vs. Particulate Organic Carbon Concentrations in Surface Water, RM 2–16 (XAD)

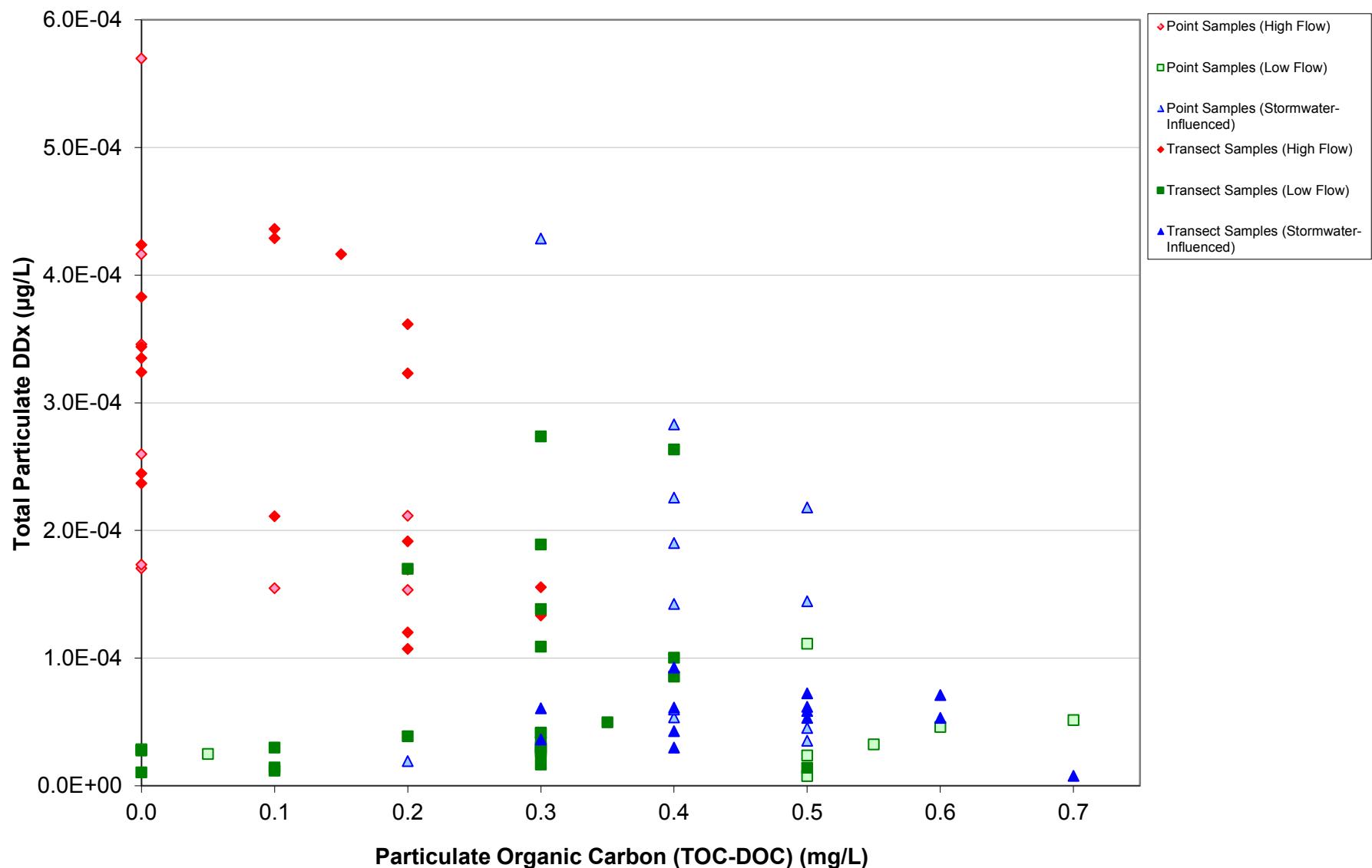


Figure 5.4-73b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total DDX Particulate Concentrations vs. Particulate Organic Carbon Concentrations in Surface Water, RM 2-16 (XAD), Scale Zoom

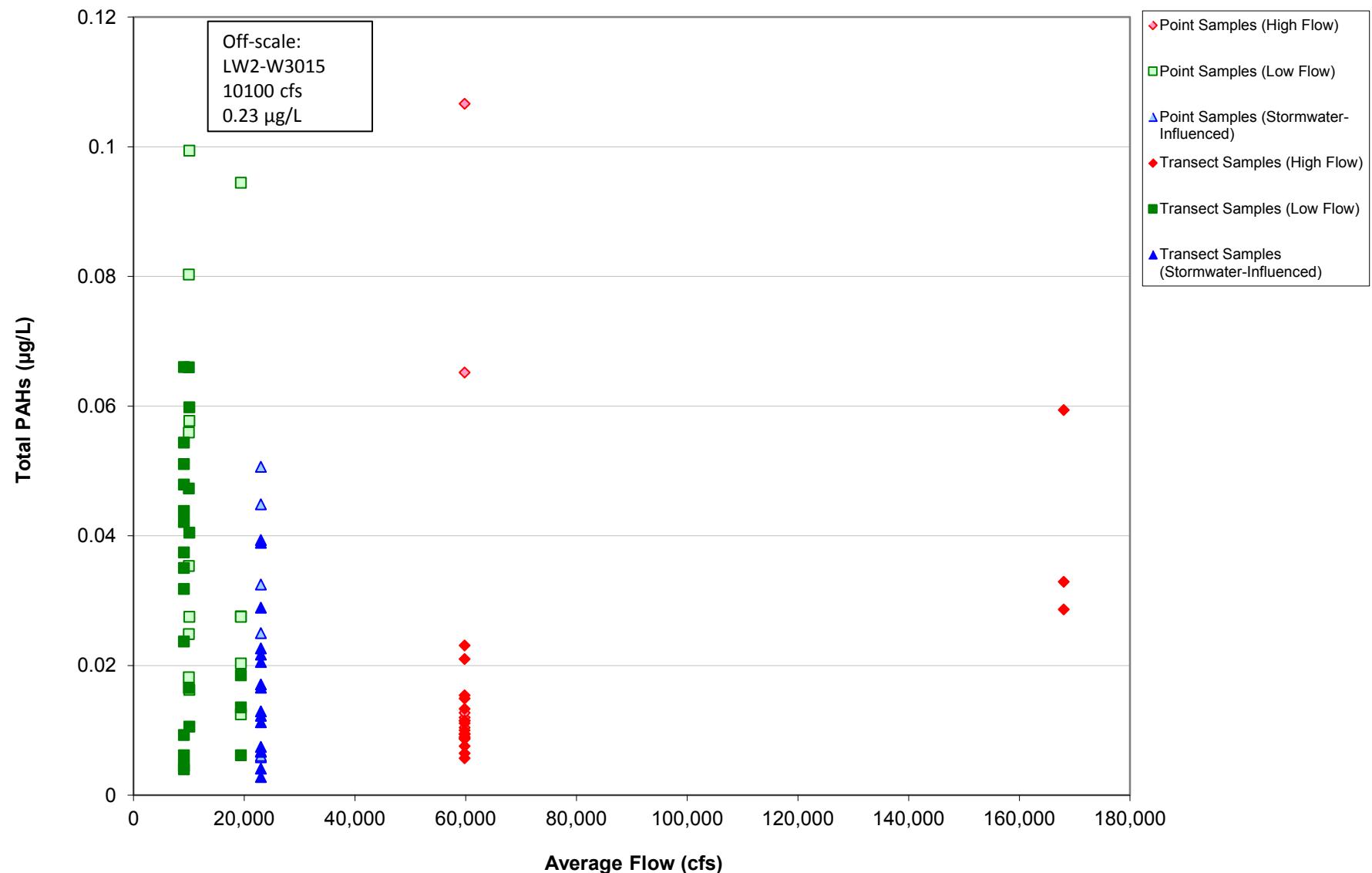


Figure 5.4-74
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total PAHs Concentrations in Surface Water vs.
 Flow Rate, RM 2-16 (XAD)

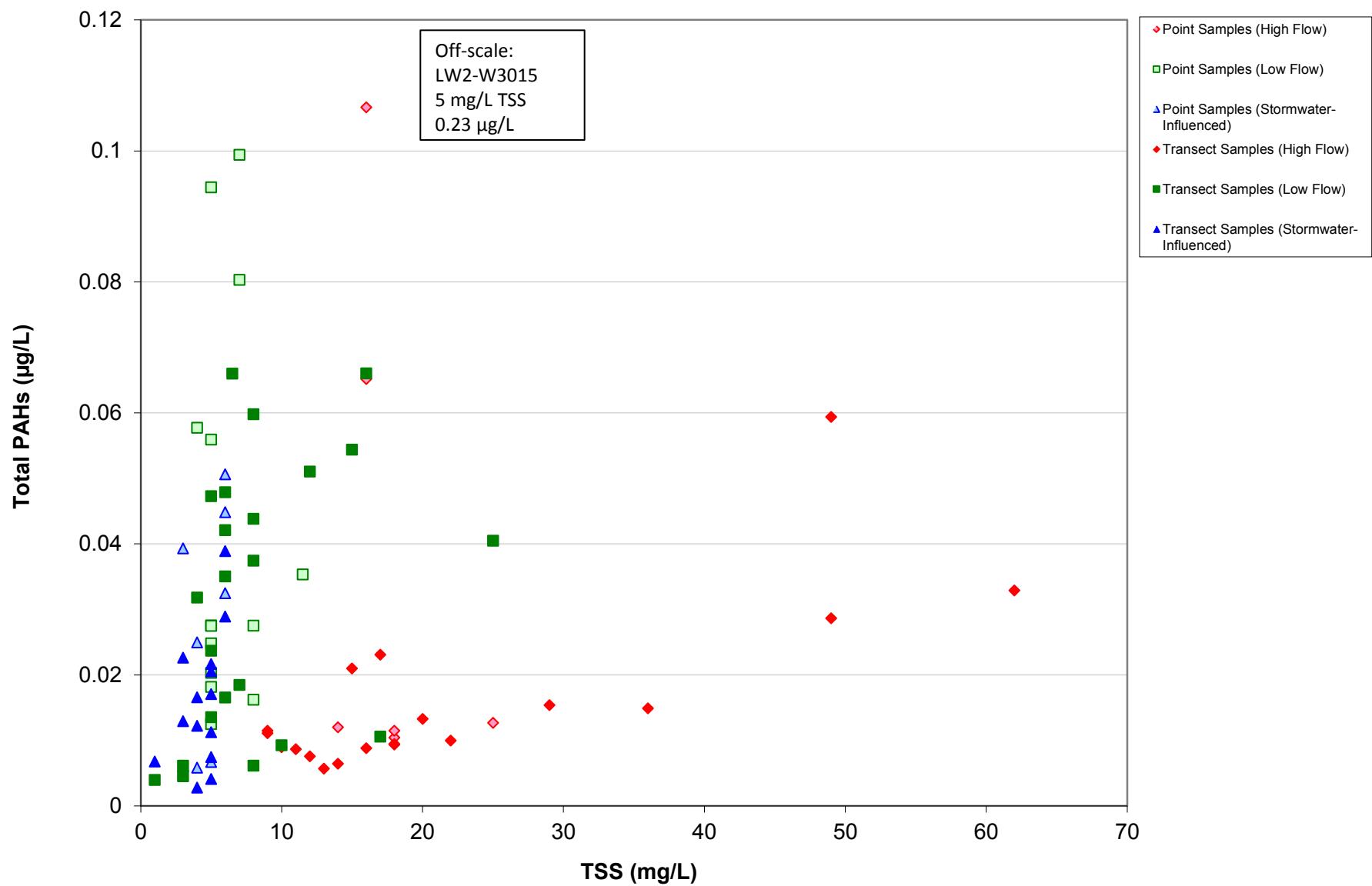


Figure 5.4-75
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total PAHs Concentrations vs. Total Suspended Solids Concentrations in Surface Water, RM 2–16 (XAD)

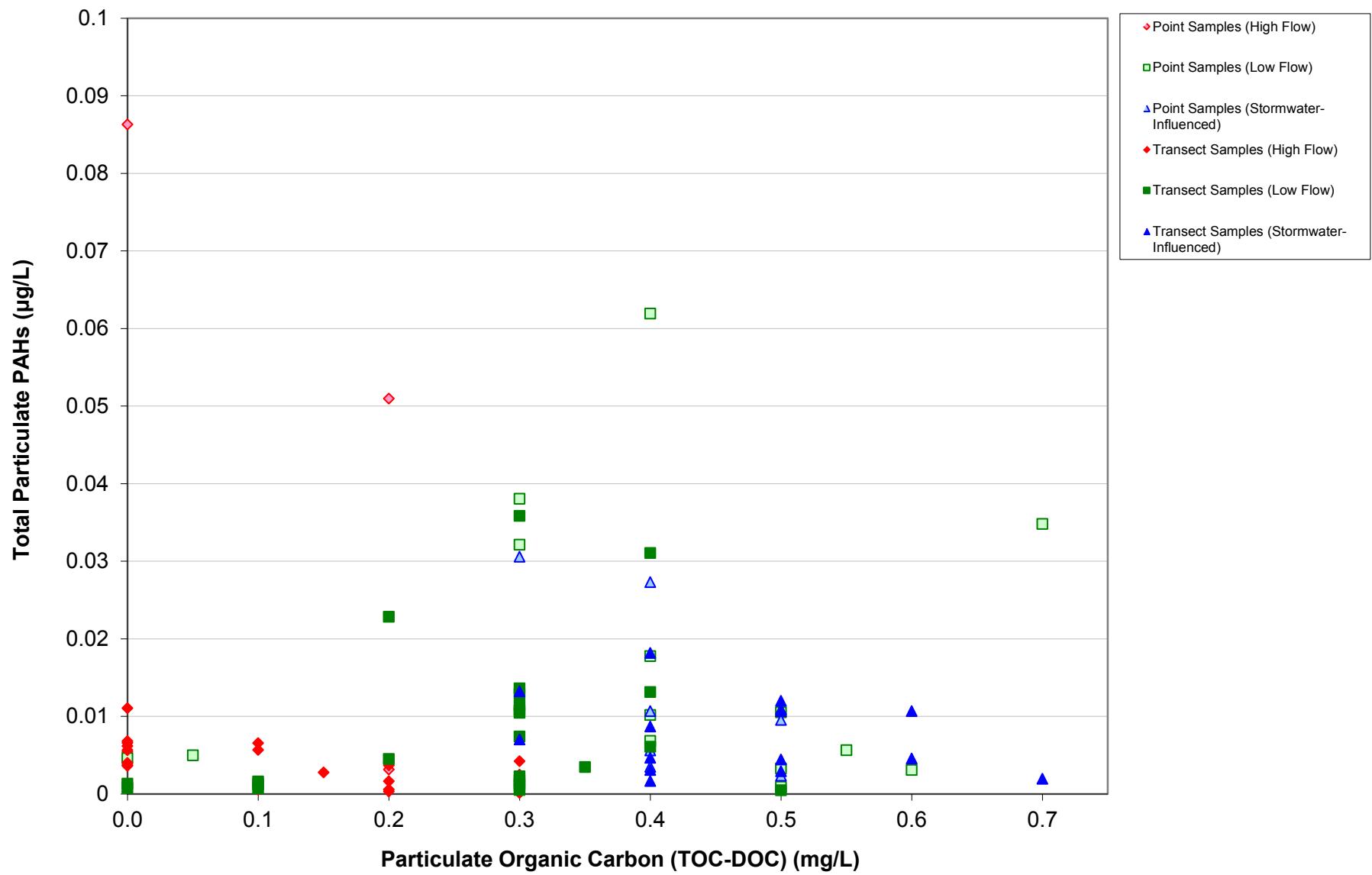


Figure 5.4-76
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total PAH Particulate Concentrations vs. Particulate Organic Carbon Concentrations in Surface Water, RM 2-16 (XAD)

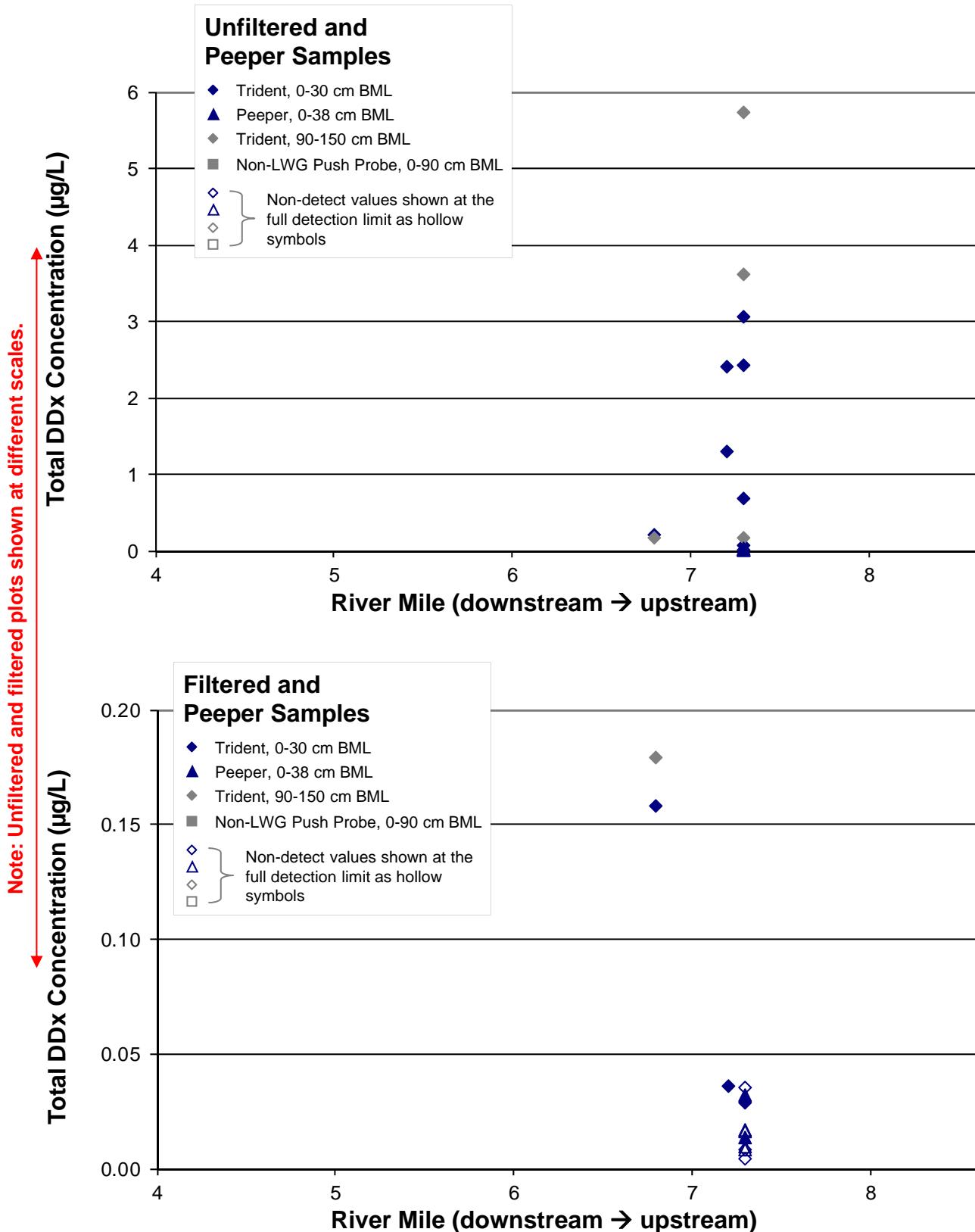


Figure 5.5-1a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plots of Total DDx Concentrations in Transition
 Zone Water, Filtered and Unfiltered Peeper Samples

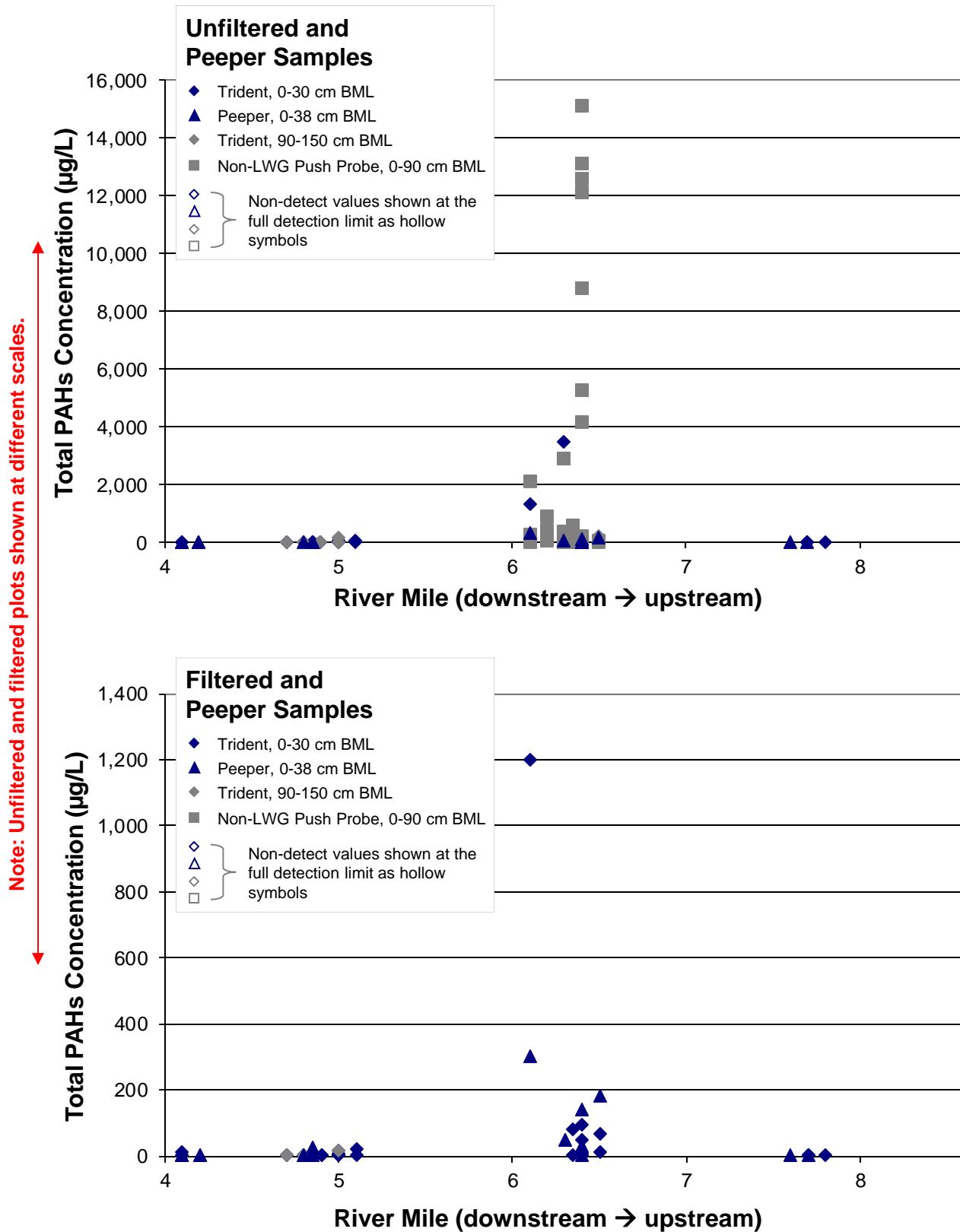


Figure 5.5-1b
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plots of Total PAHs Concentrations in Transition
Zone Water, Filtered and Unfiltered Peeper Samples

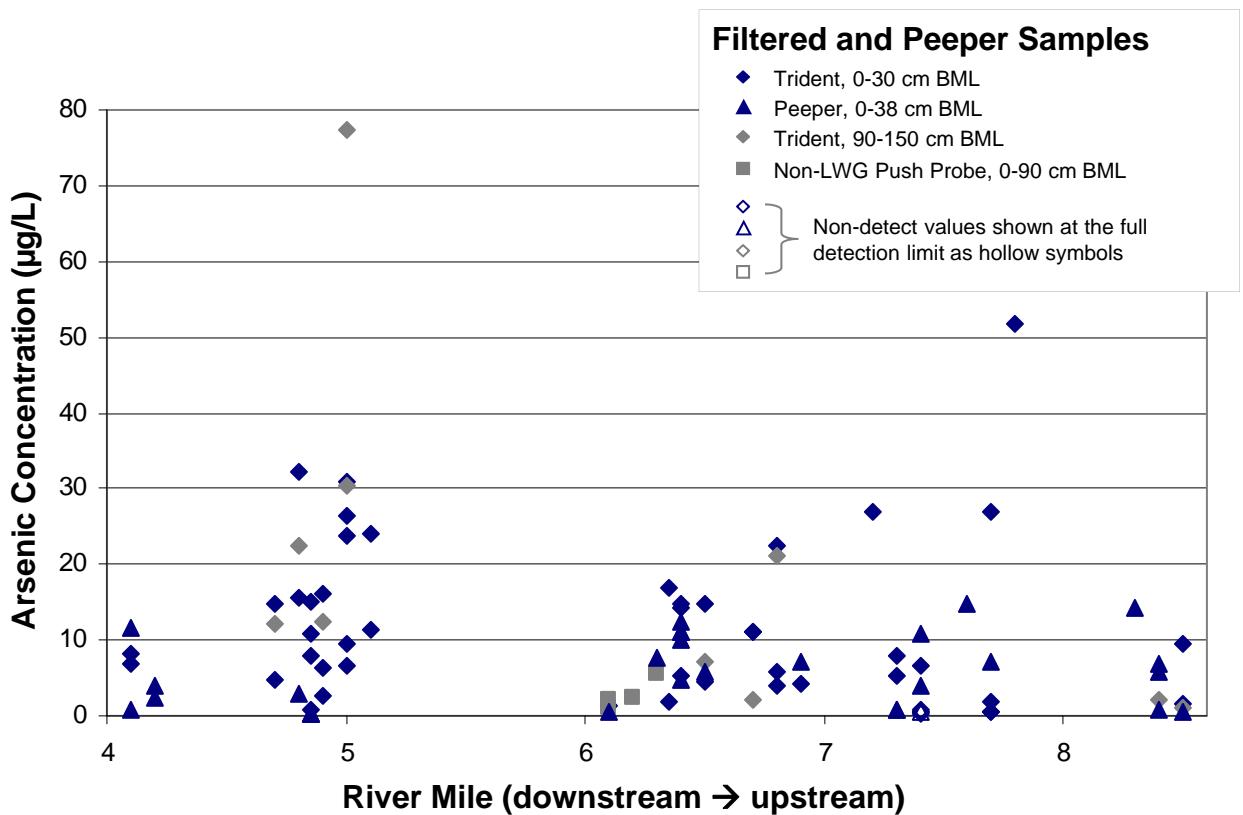
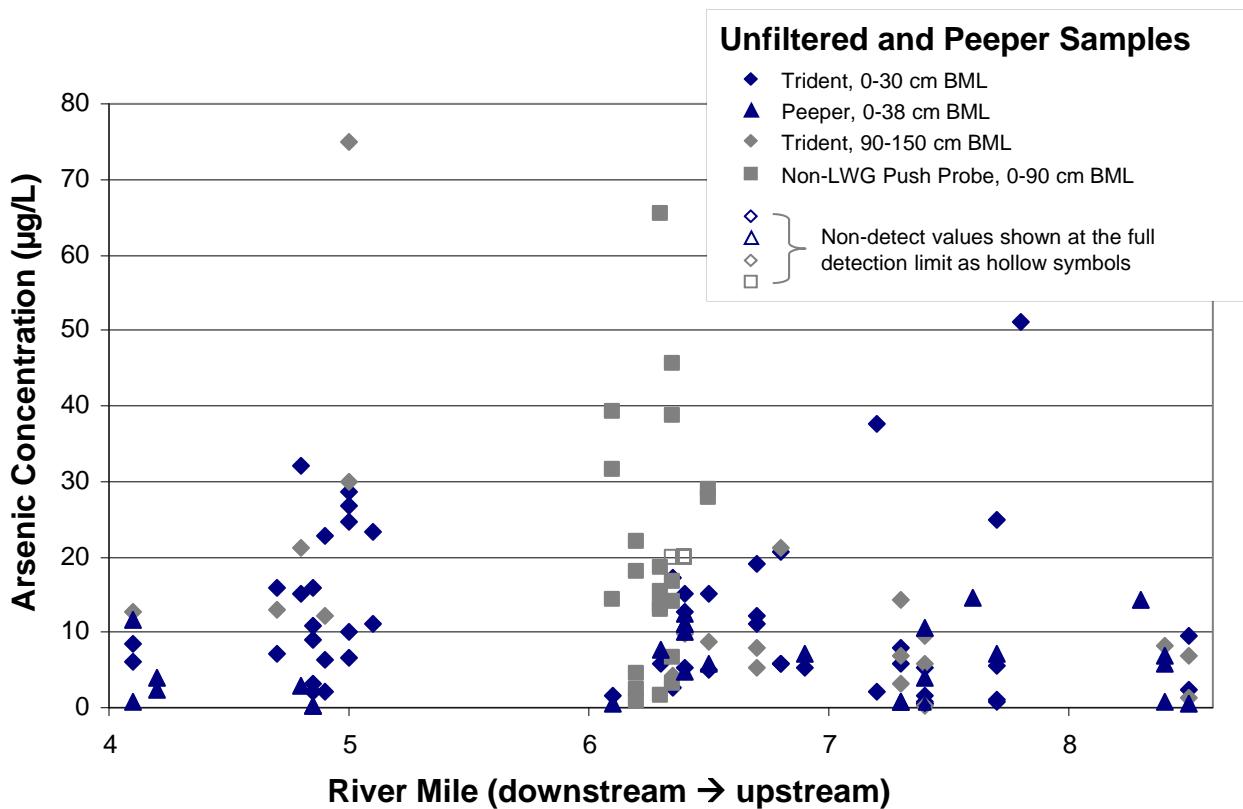


Figure 5.5-1c
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plots of Arsenic Concentrations in Transition
 Zone Water, Filtered and Unfiltered Peeper Samples

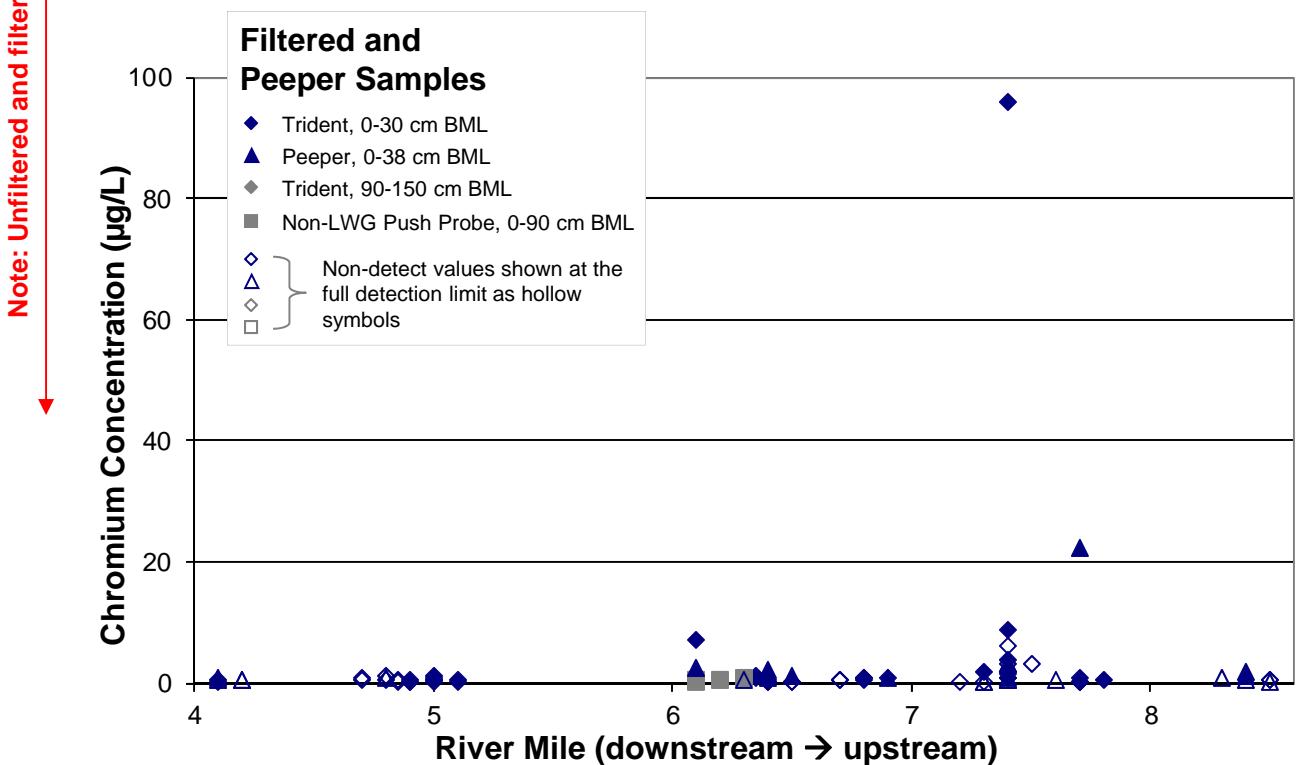
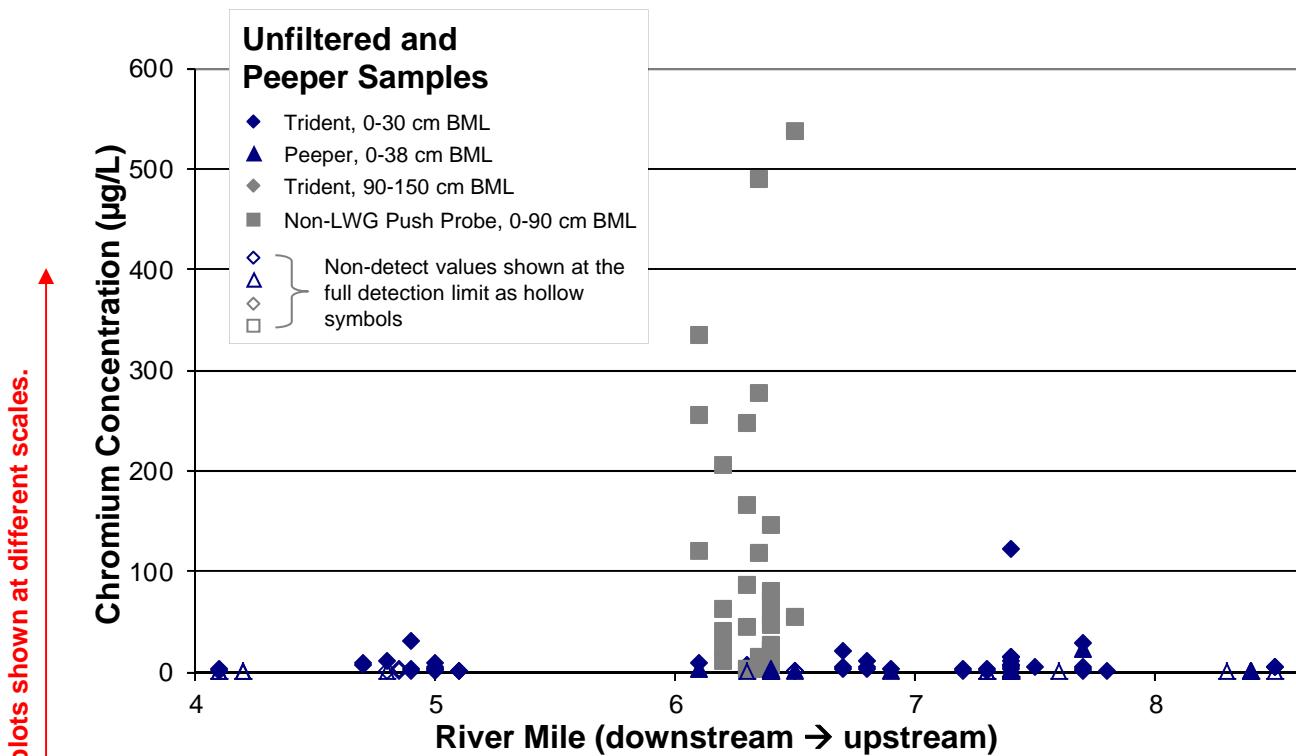


Figure 5.5-1d
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plots of Chromium Concentrations in Transition
 Zone Water, Filtered and Unfiltered Peeper Samples

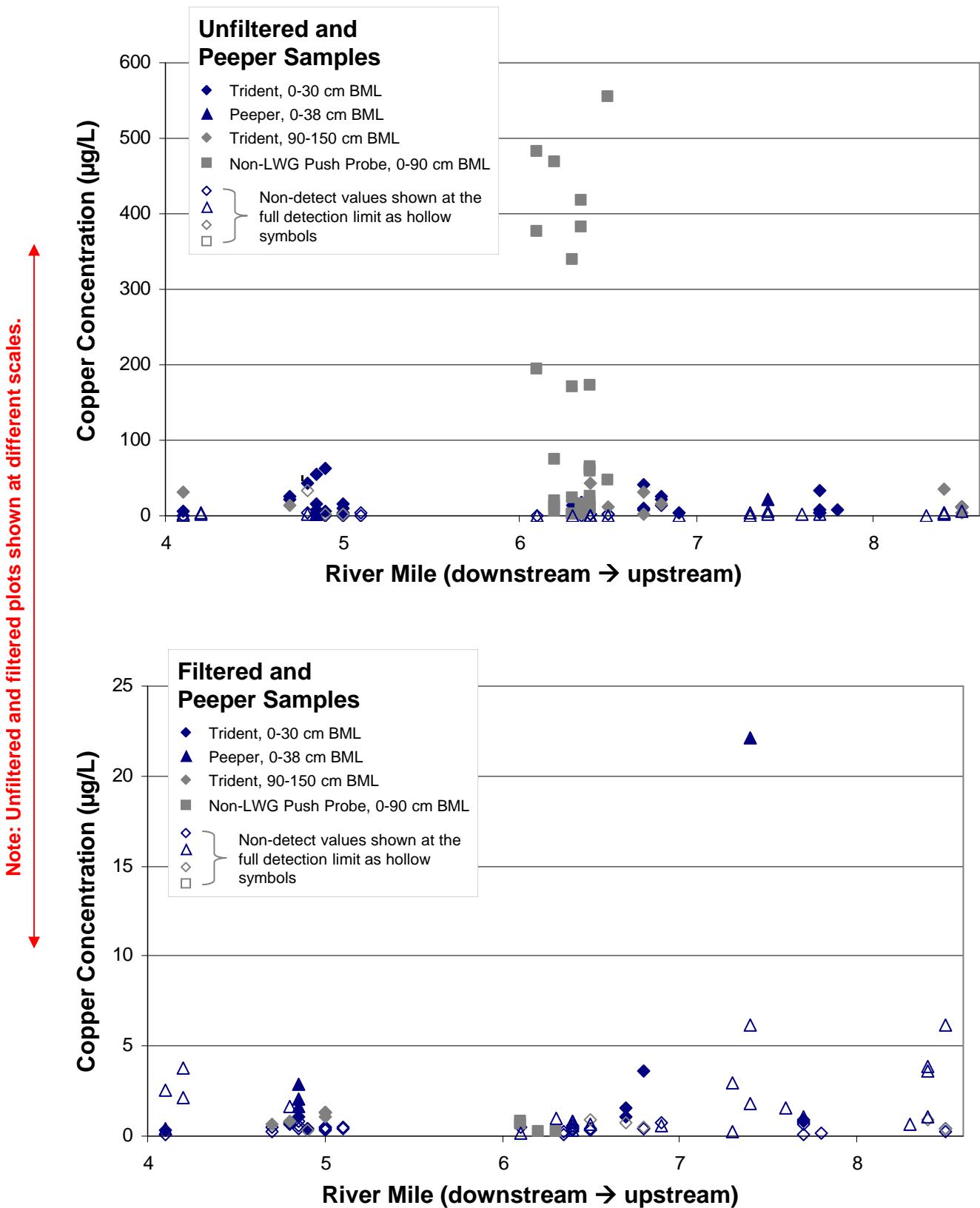


Figure 5.5-1e
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plots of Copper Concentrations in Transition
 Zone Water, Filtered and Unfiltered Peeper Samples

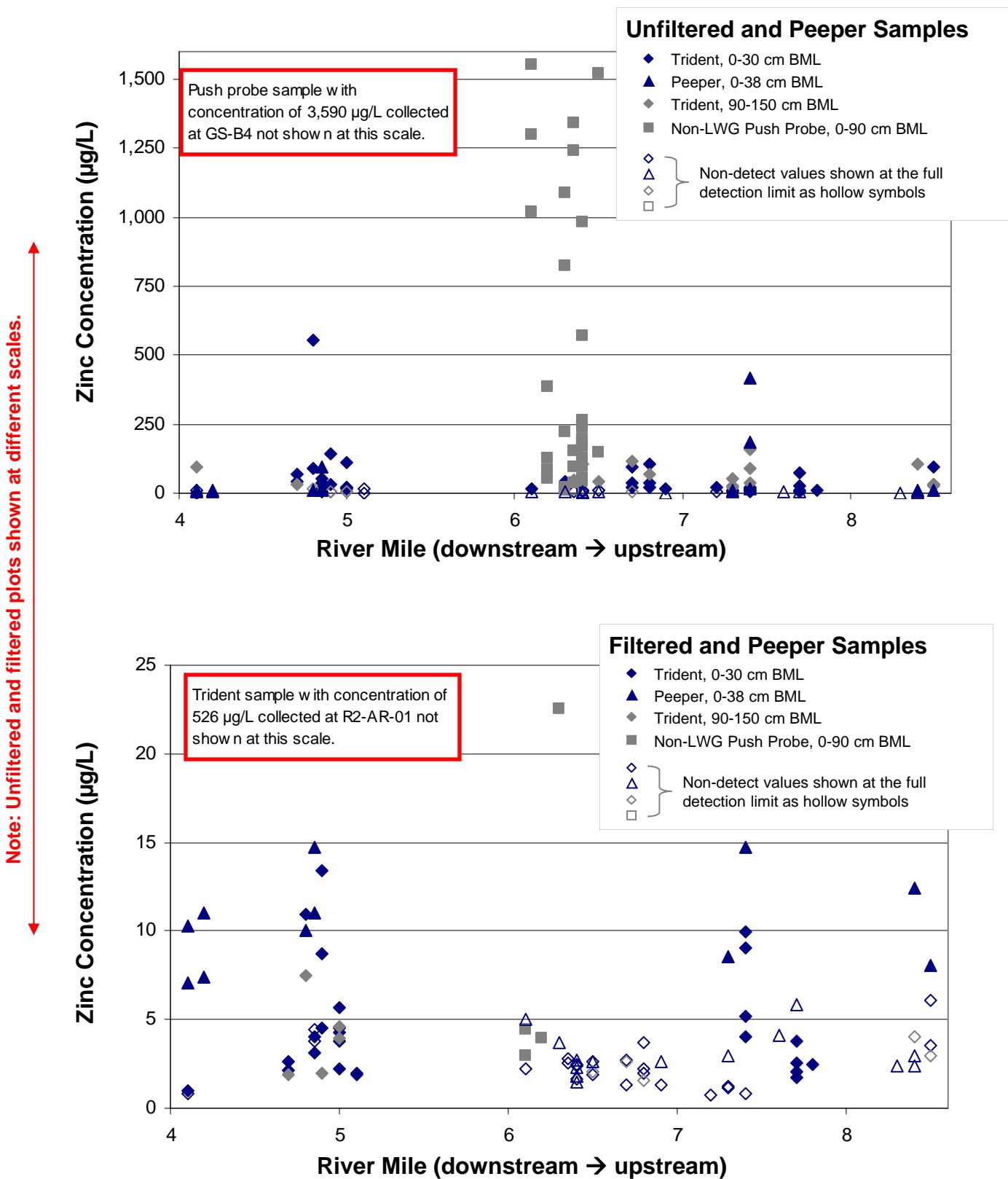


Figure 5.5-1f
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plots of Zinc Concentrations in Transition
 Zone Water, Filtered and Unfiltered Peeper Samples

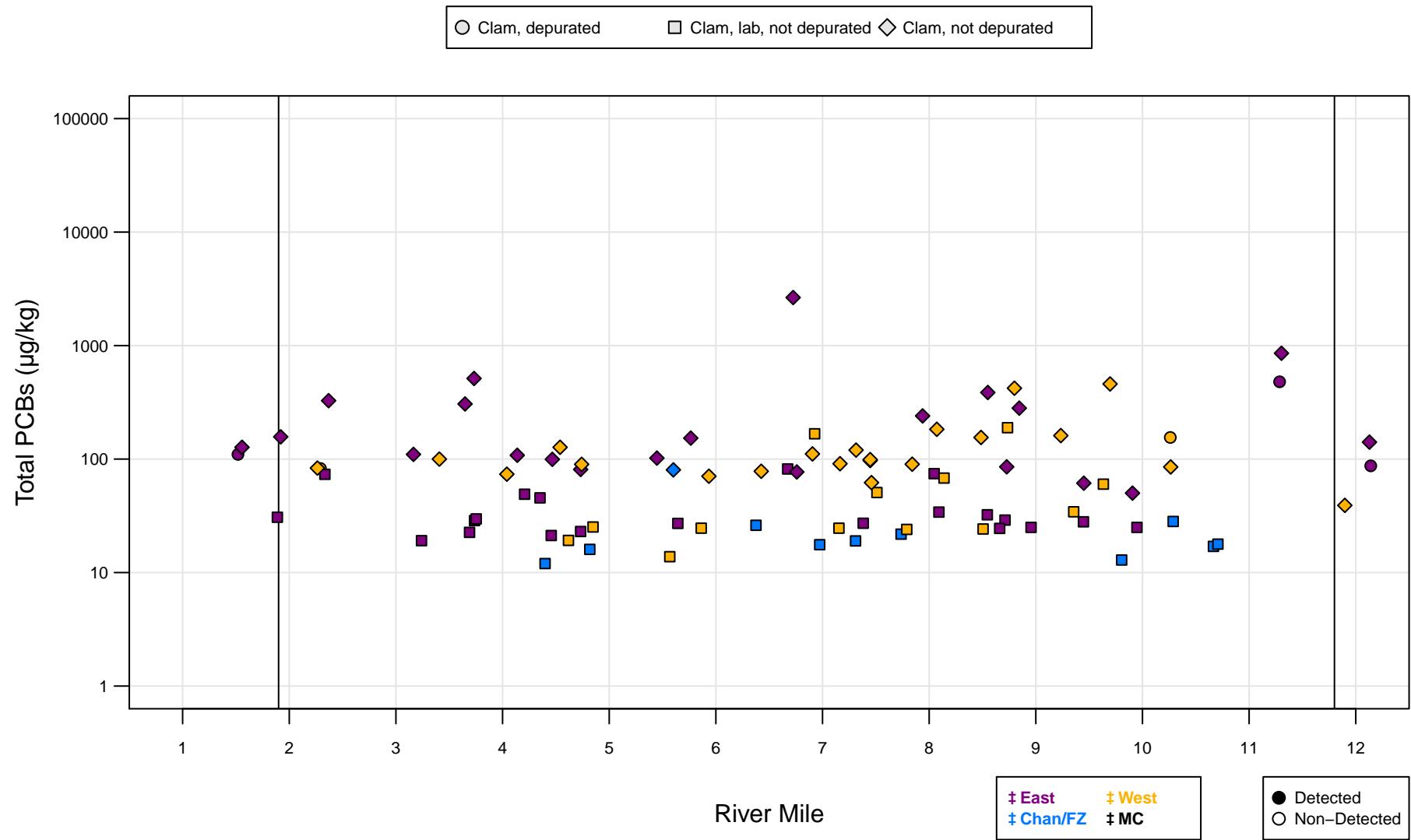


Figure 5.6–1a

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCBs in
Tissue Samples by River Mile, RM 0.8–12.2

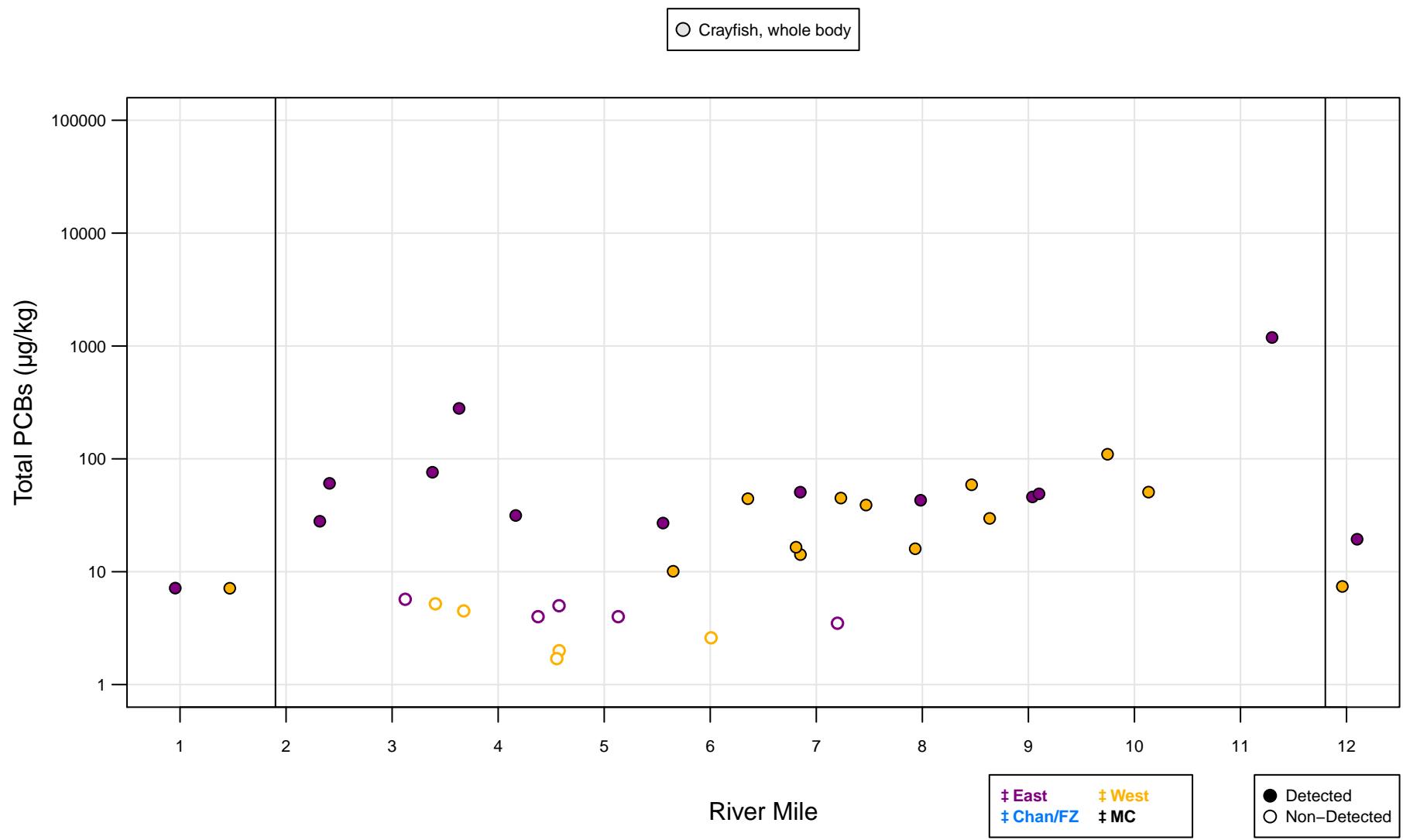
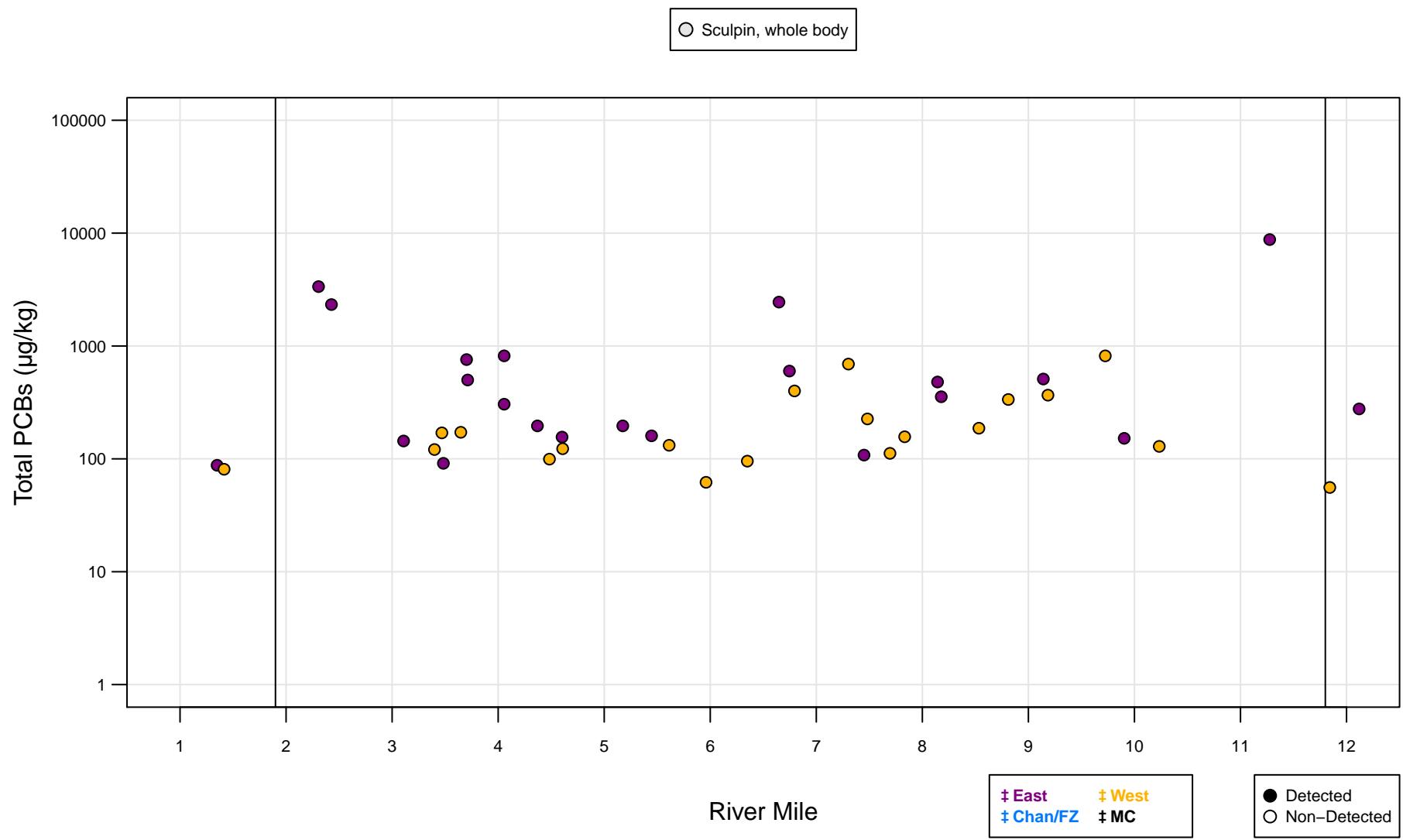


Figure 5.6-1b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCBs in
Tissue Samples by River Mile, RM 0.8–12.2



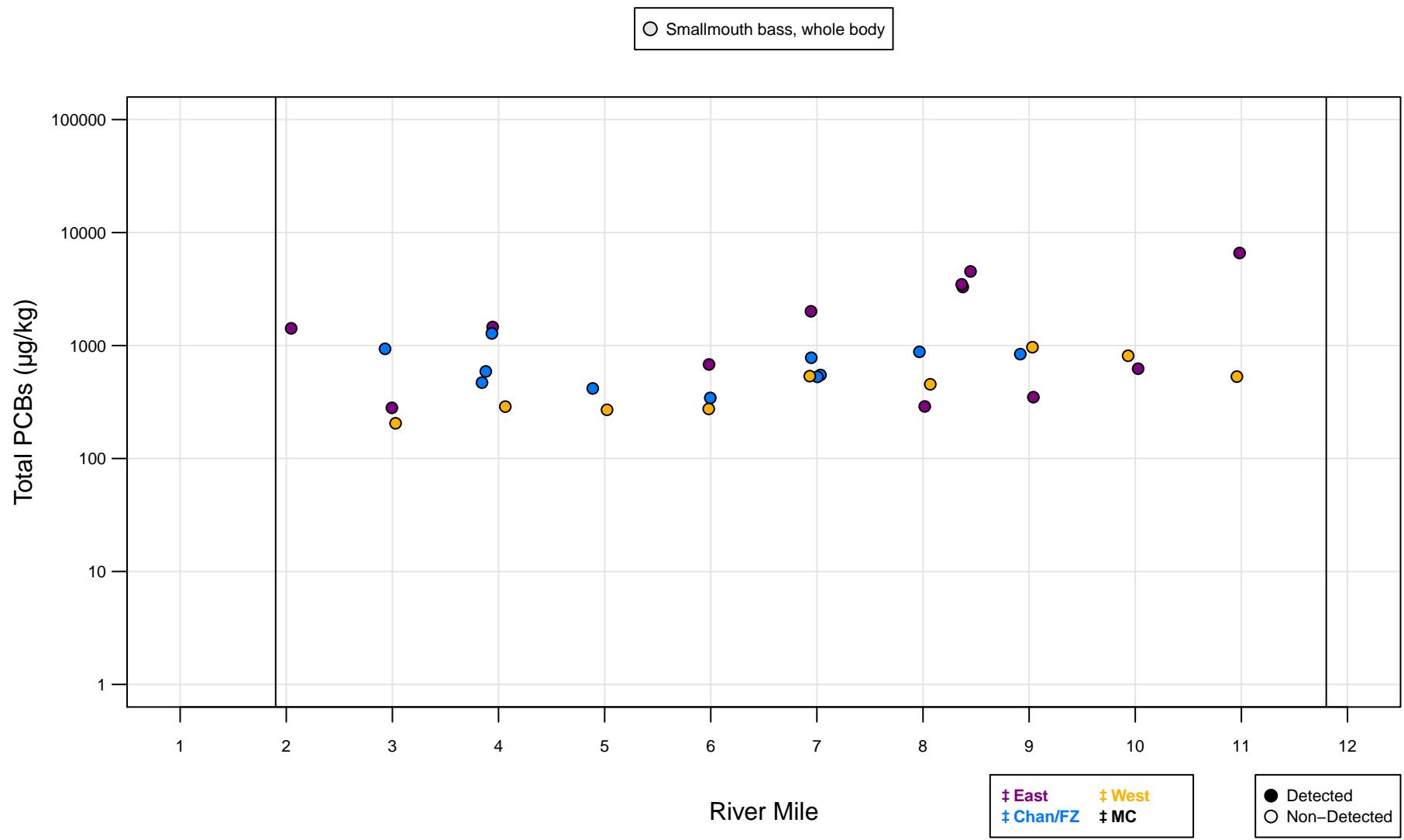


Figure 5.6-1d
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCBs in
Tissue Samples by River Mile, RM 0.8–12.2

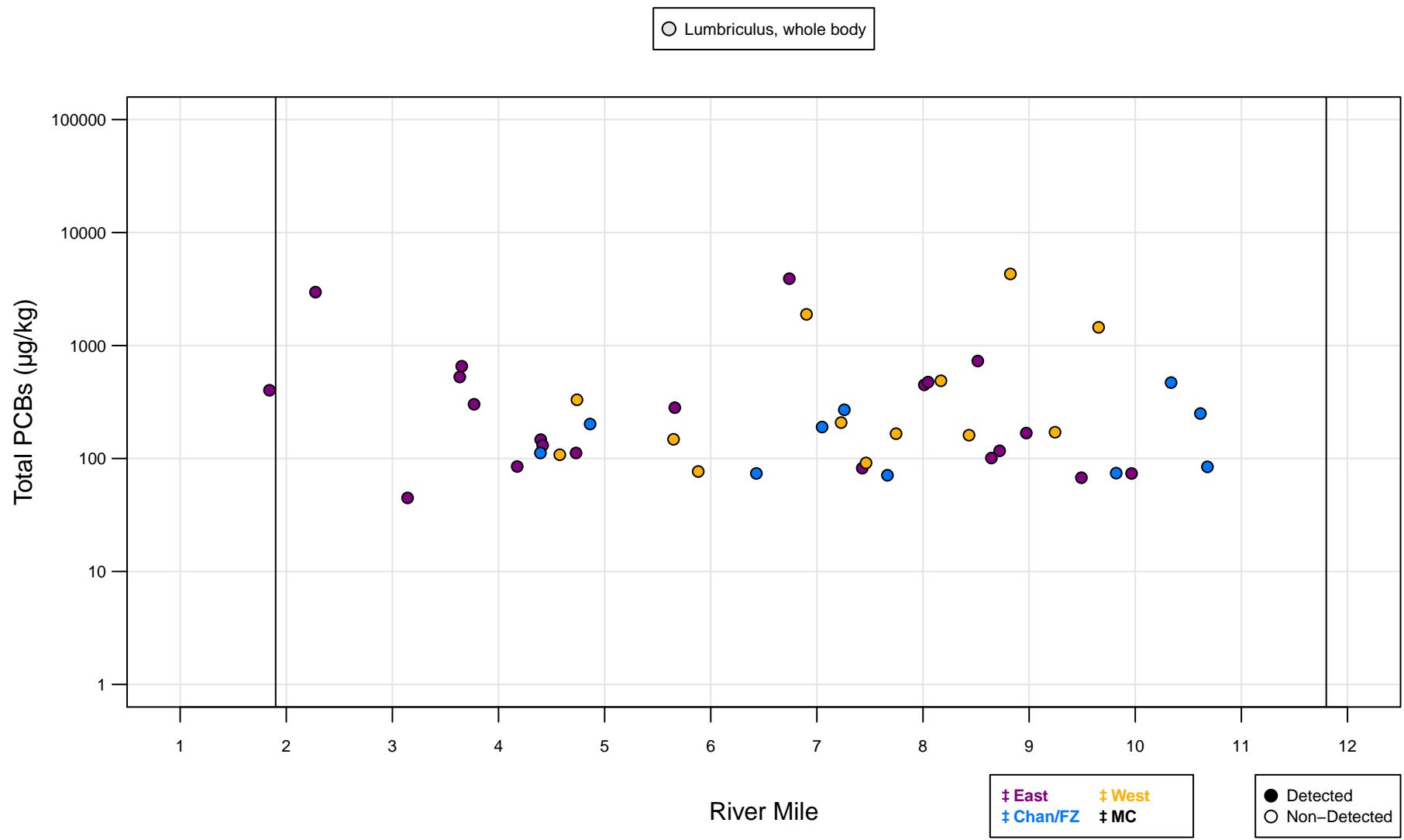


Figure 5.6-1e

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCBs in
Tissue Samples by River Mile, RM 0.8–12.2

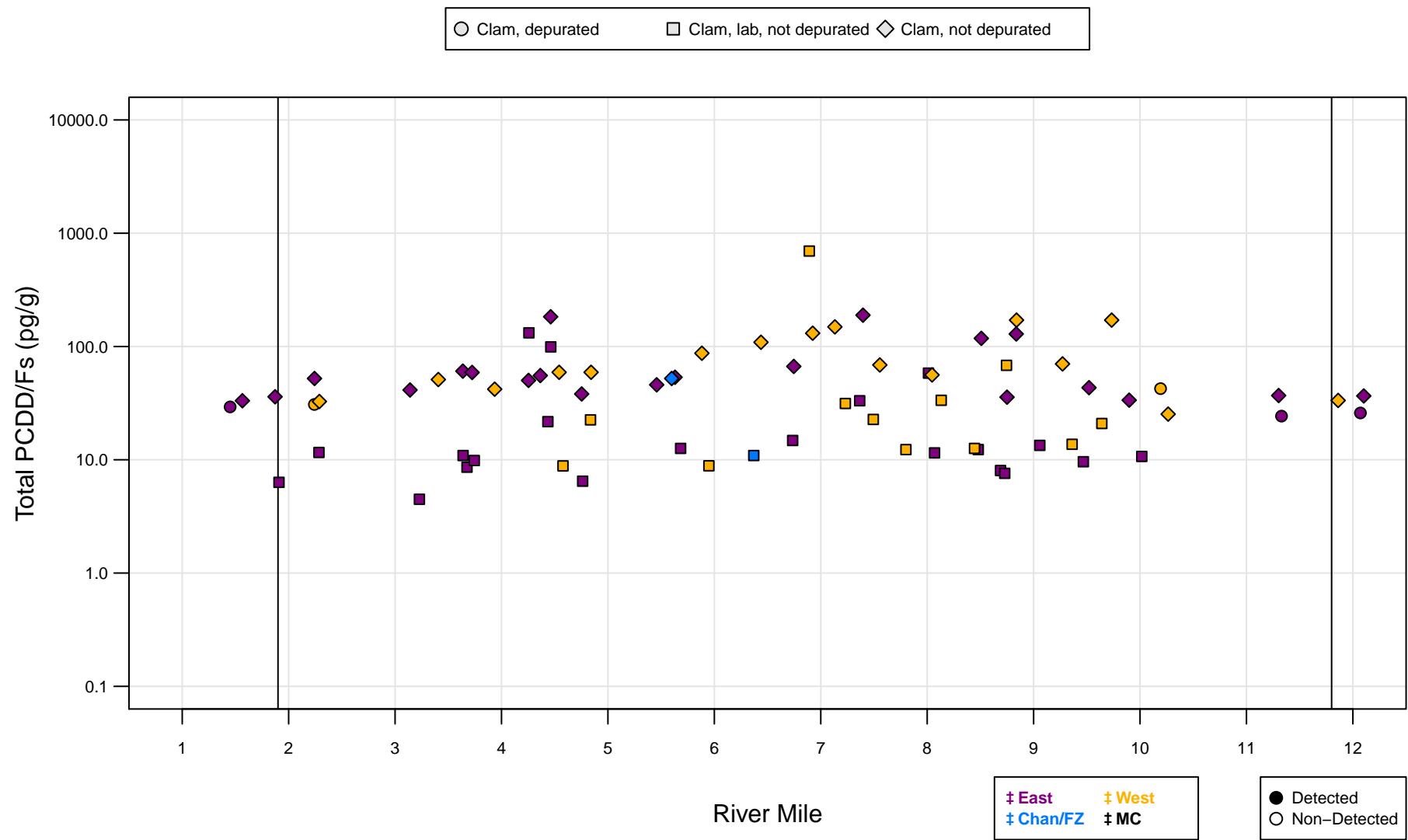


Figure 5.6-2a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total PCDD/Fs in
 Tissue Samples by River Mile, RM 0.8–12.2

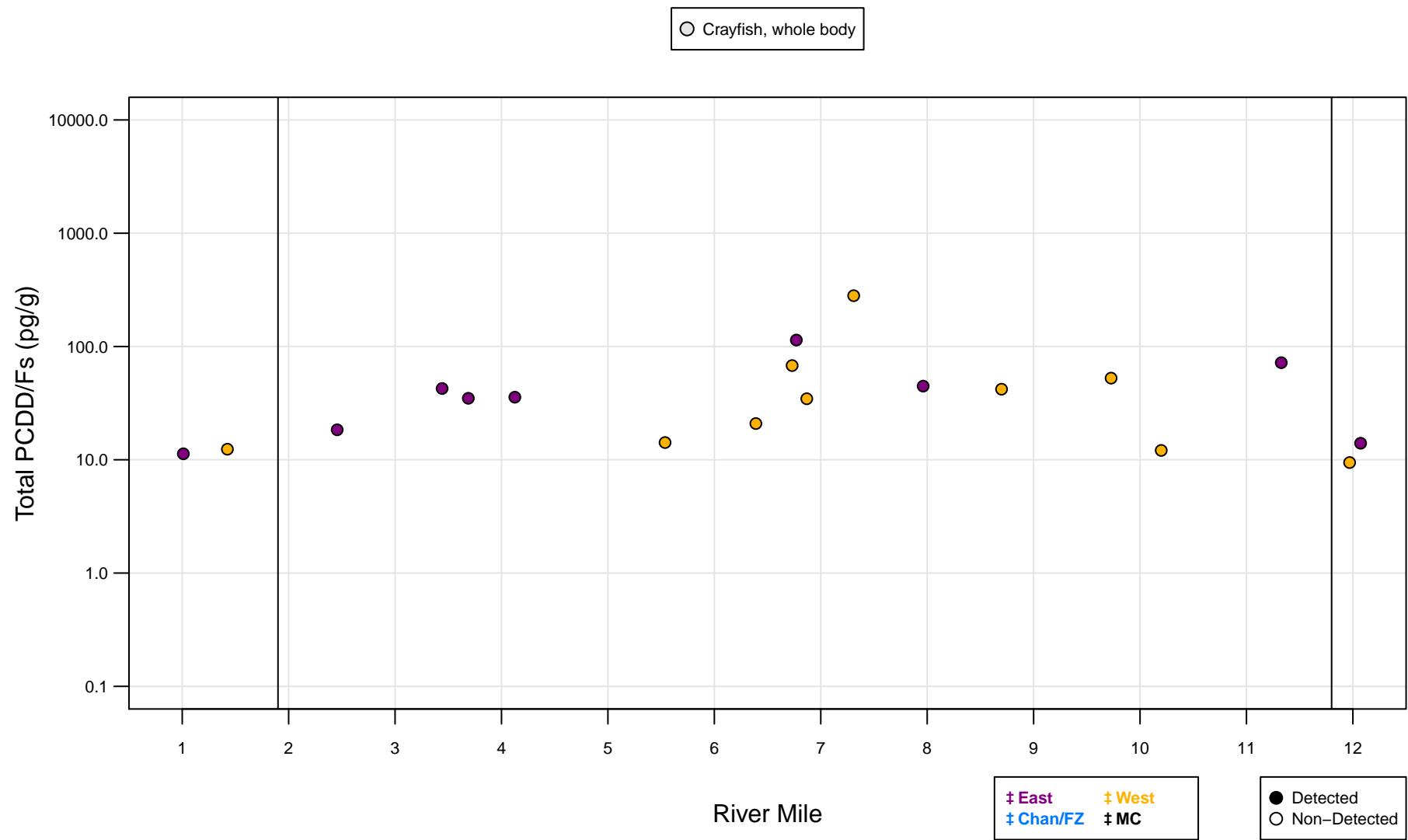


Figure 5.6-2b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCDD/Fs in
Tissue Samples by River Mile, RM 0.8–12.2

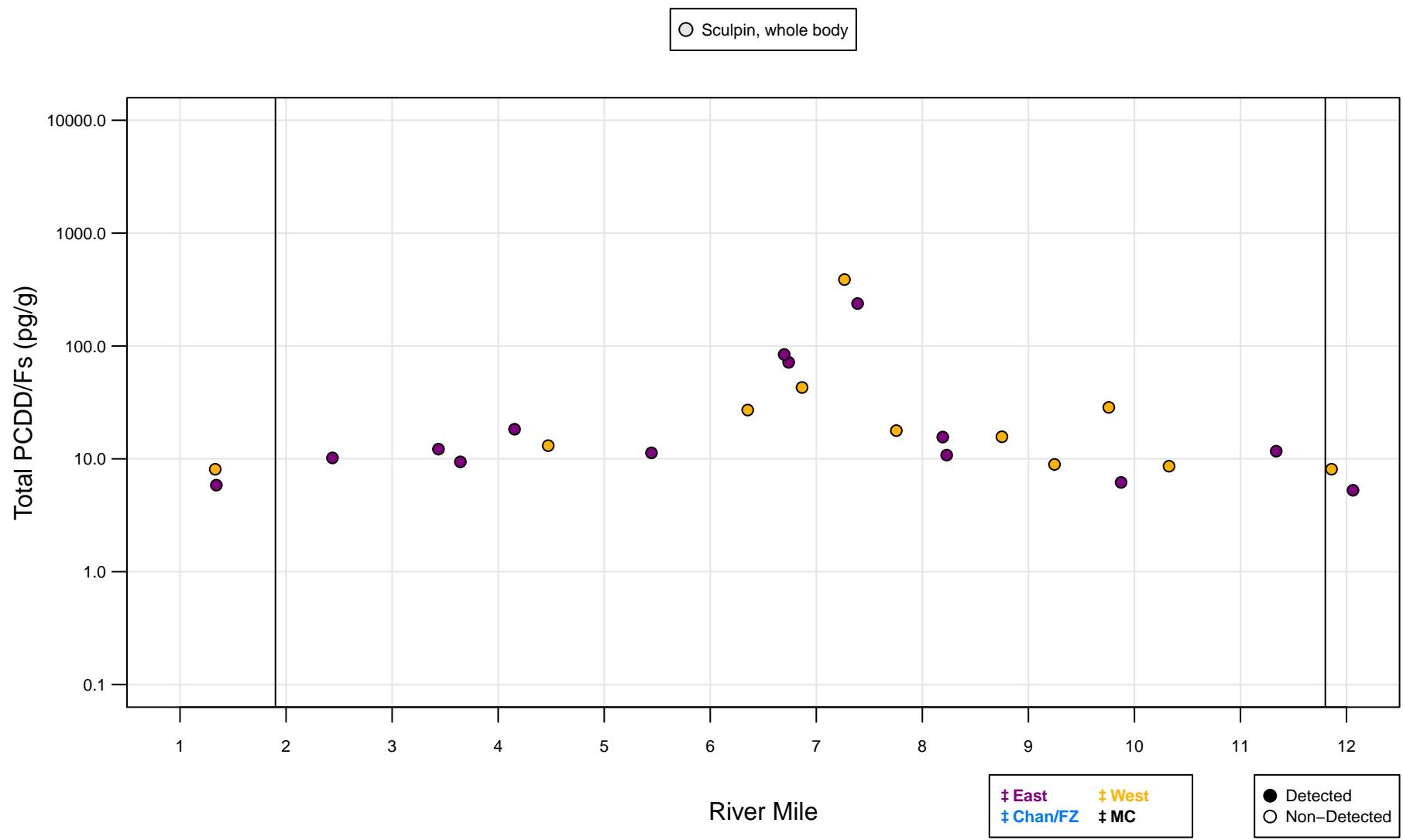


Figure 5.6-2c

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCDD/Fs in
Tissue Samples by River Mile, RM 0.8–12.2

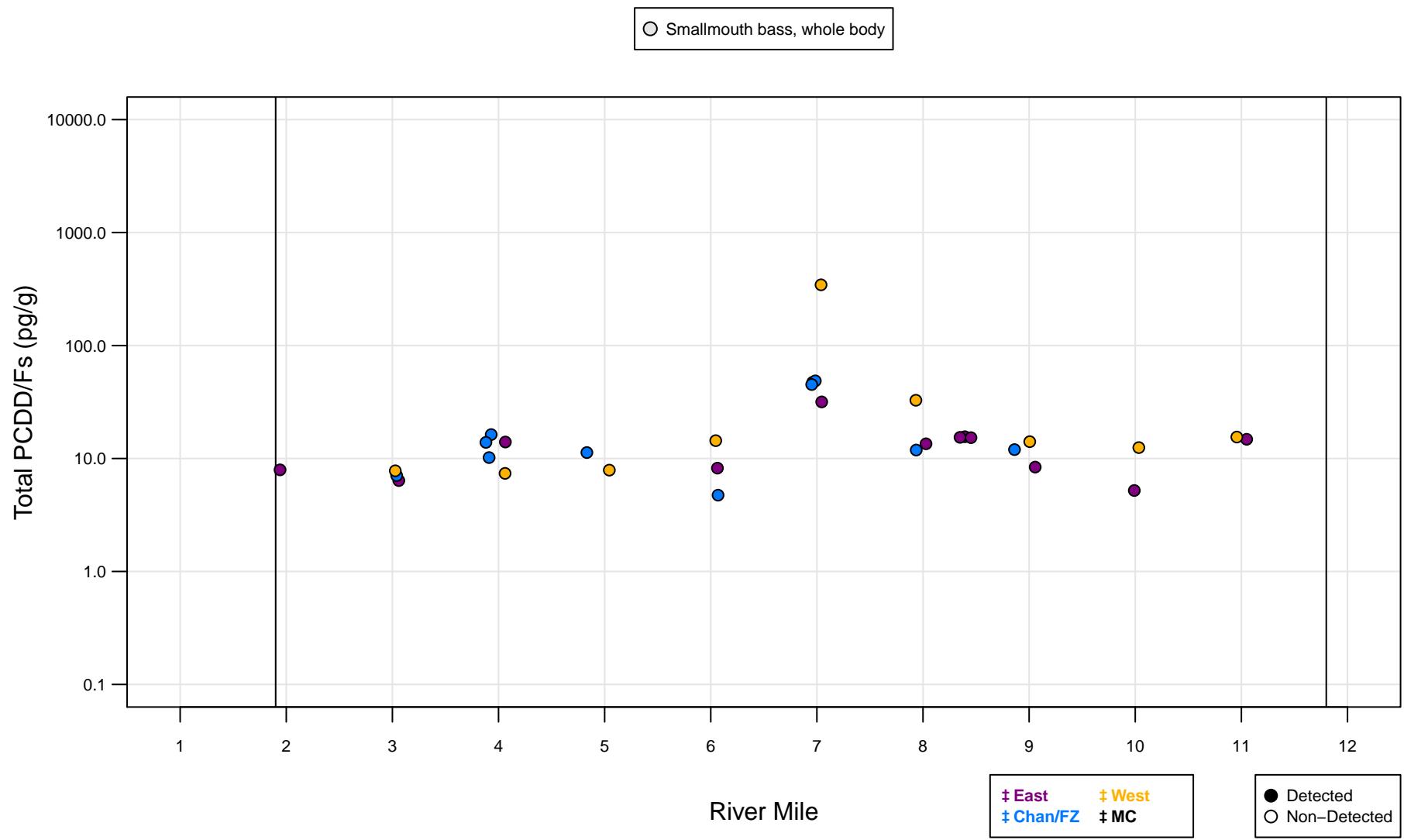


Figure 5.6–2d

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCDD/Fs in
Tissue Samples by River Mile, RM 0.8–12.2

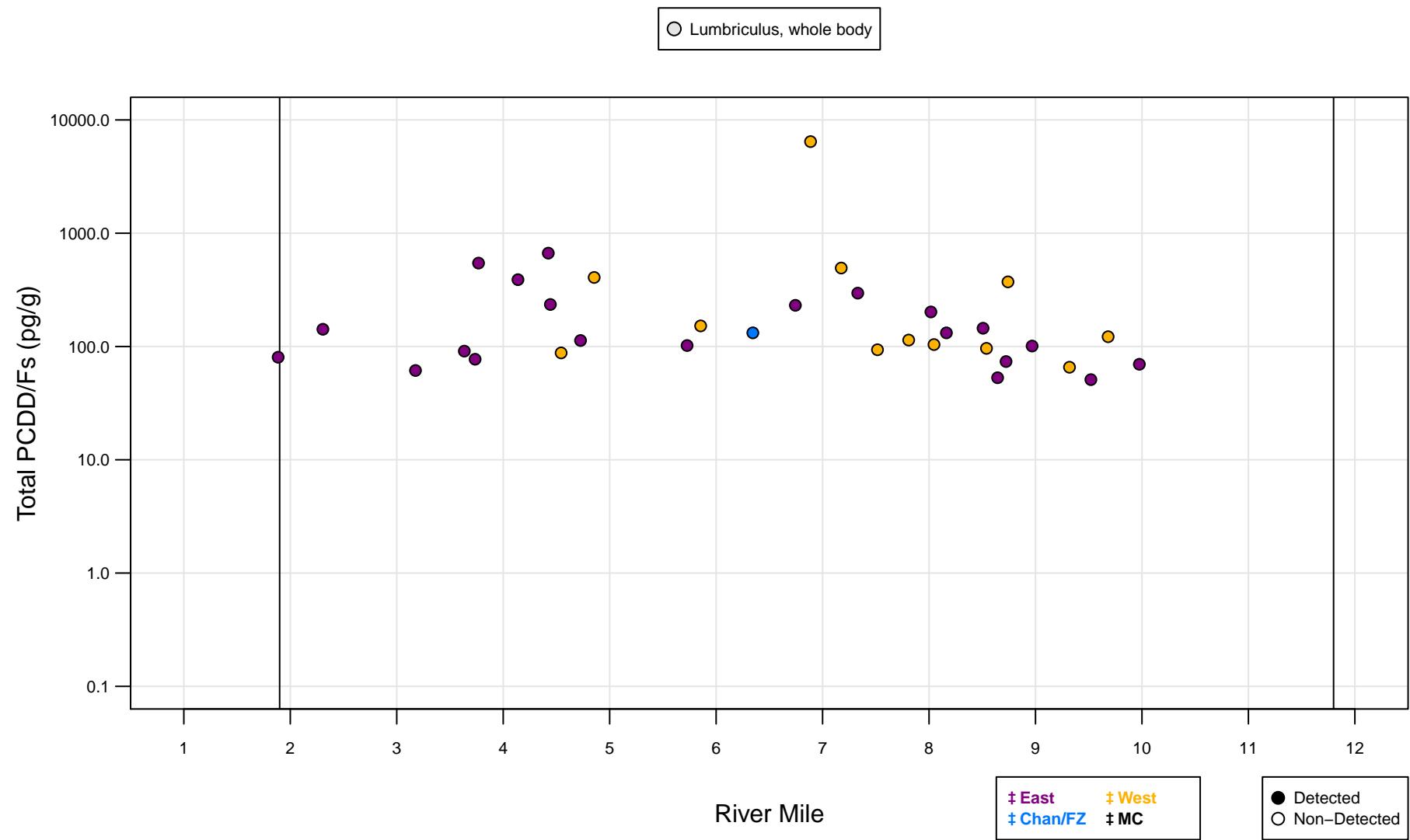


Figure 5.6–2e
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PCDD/Fs in
Tissue Samples by River Mile, RM 0.8–12.2

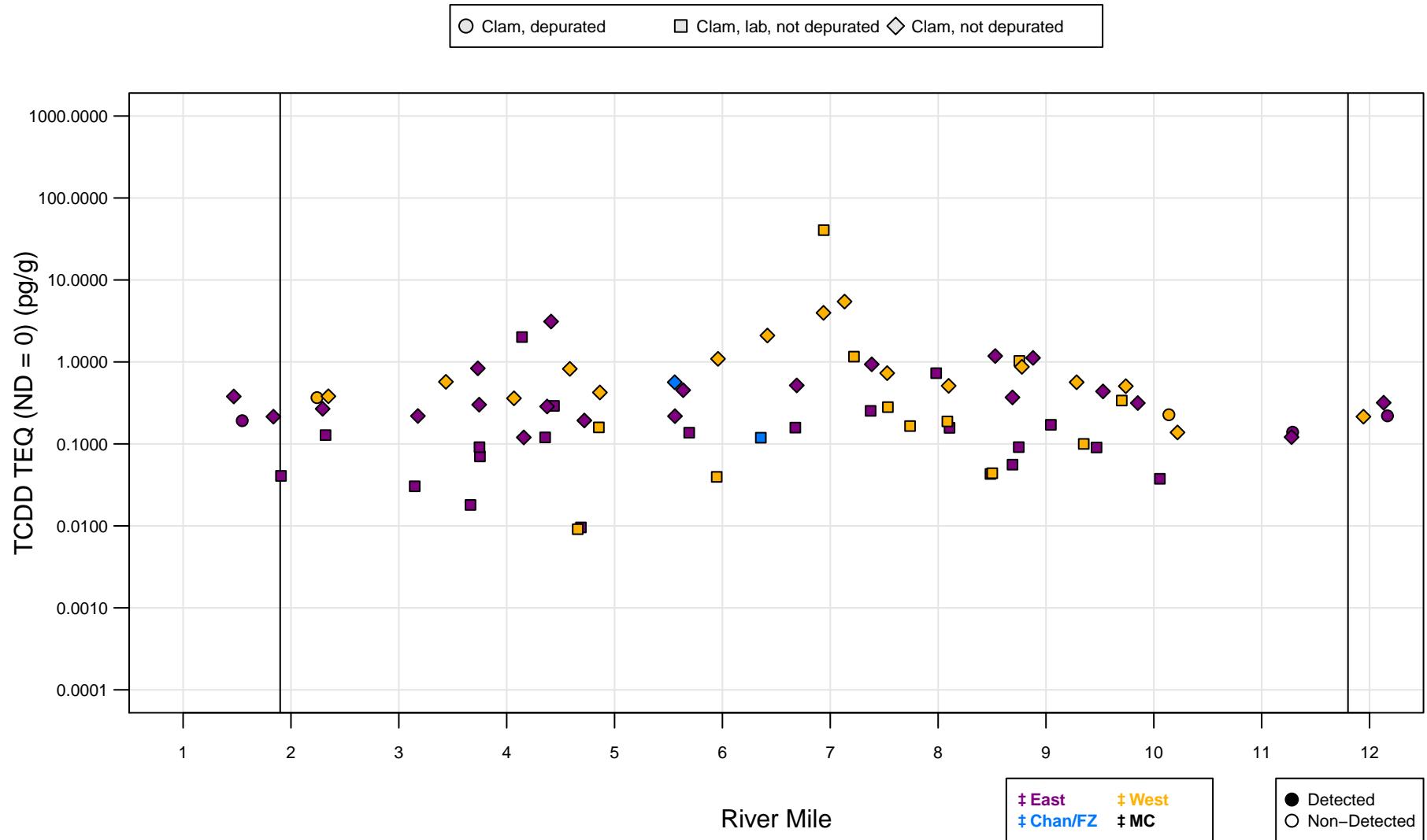


Figure 5.6-3a

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of TCDD TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8–12.2

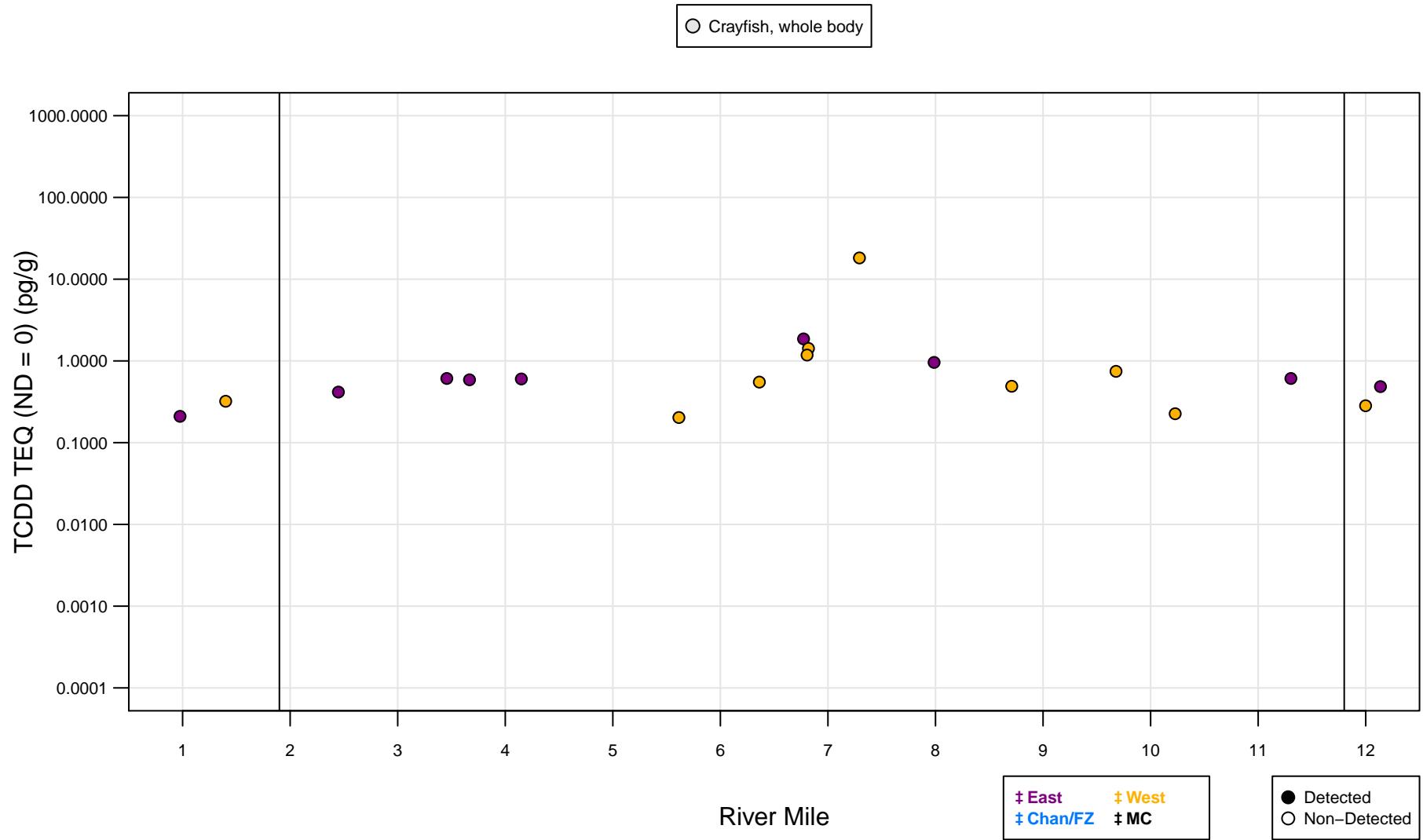


Figure 5.6-3b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of TCDD TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8–12.2

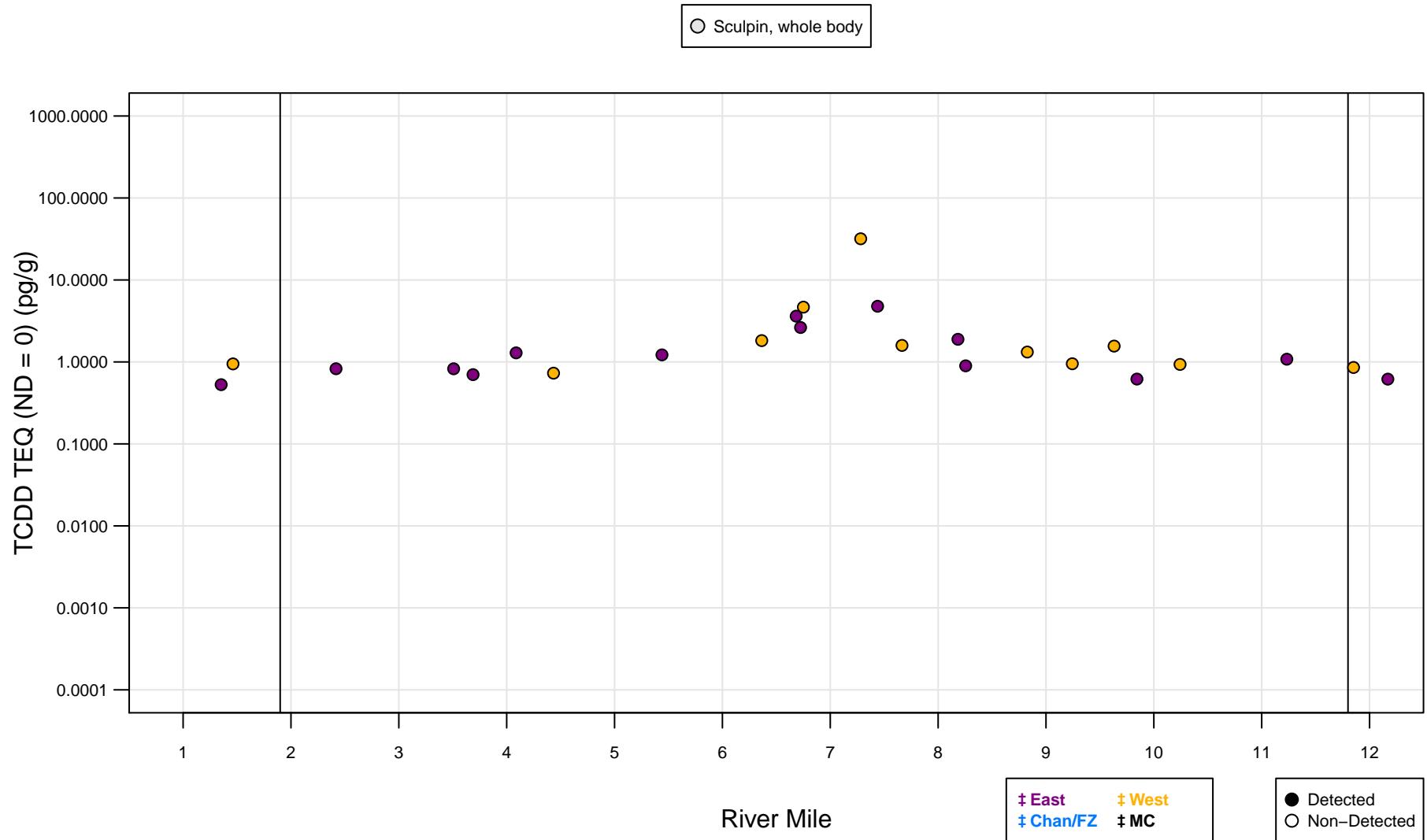


Figure 5.6-3c

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of TCDD TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8–12.2

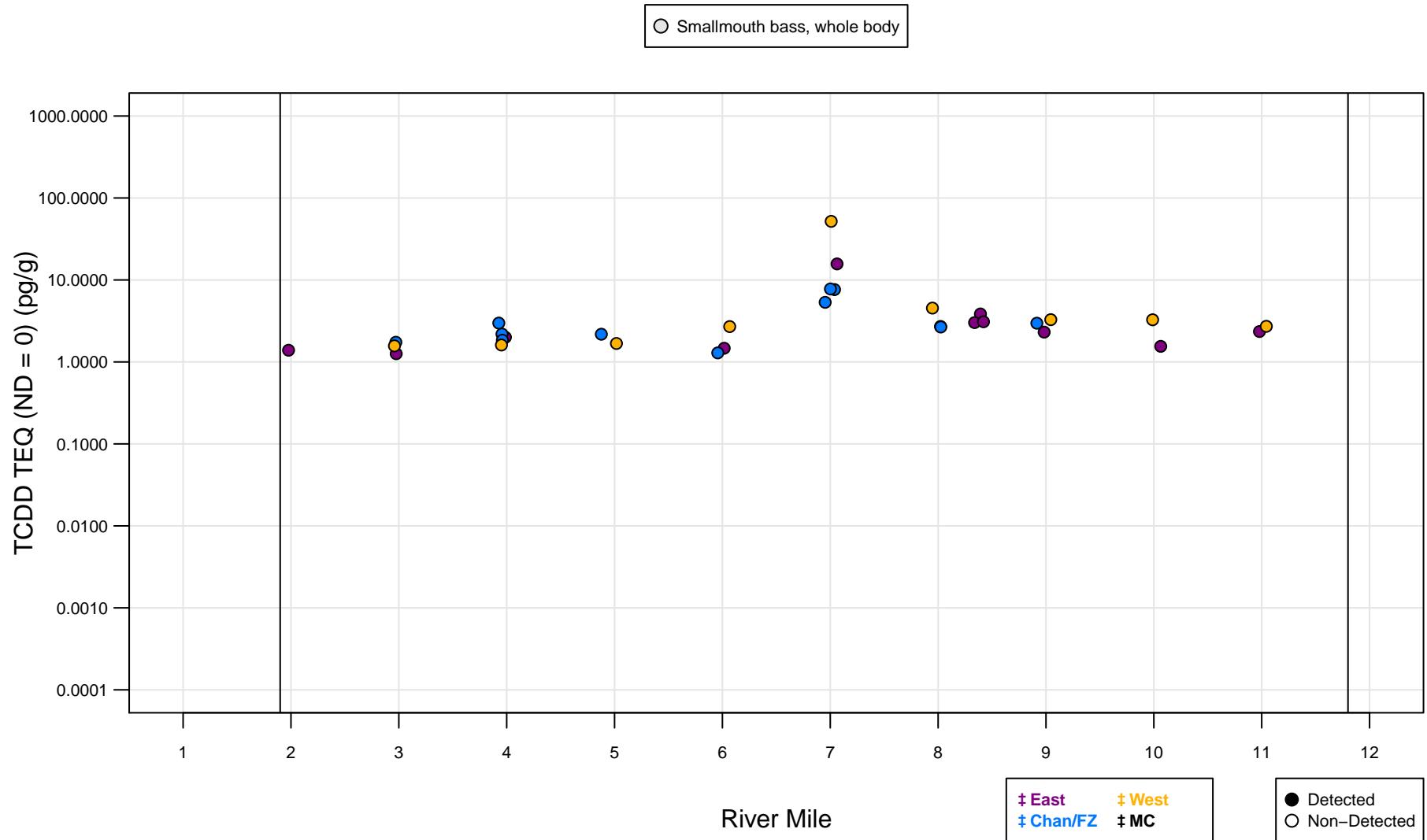


Figure 5.6-3d

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of TCDD TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8–12.2

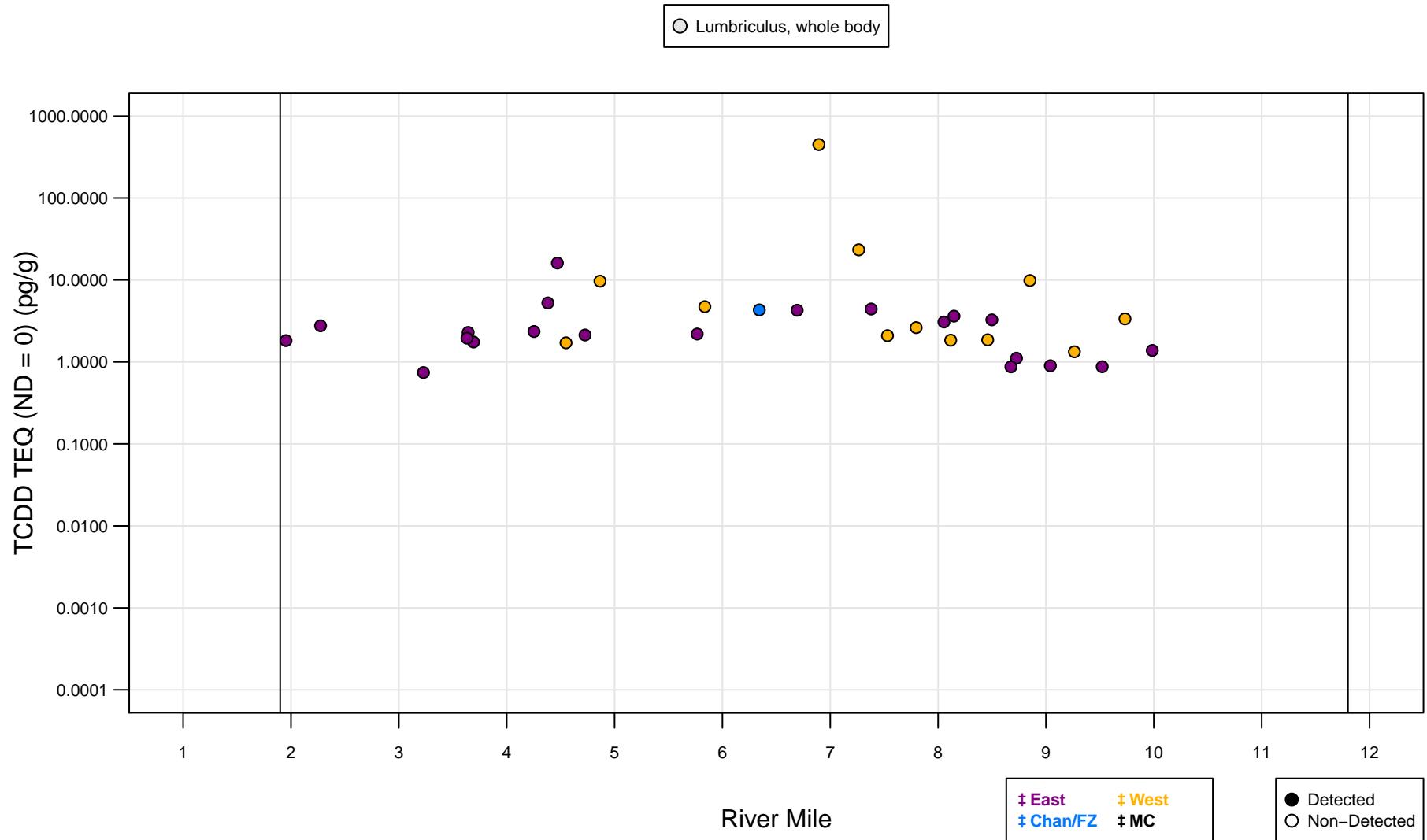


Figure 5.6-3e

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of TCDD TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8–12.2

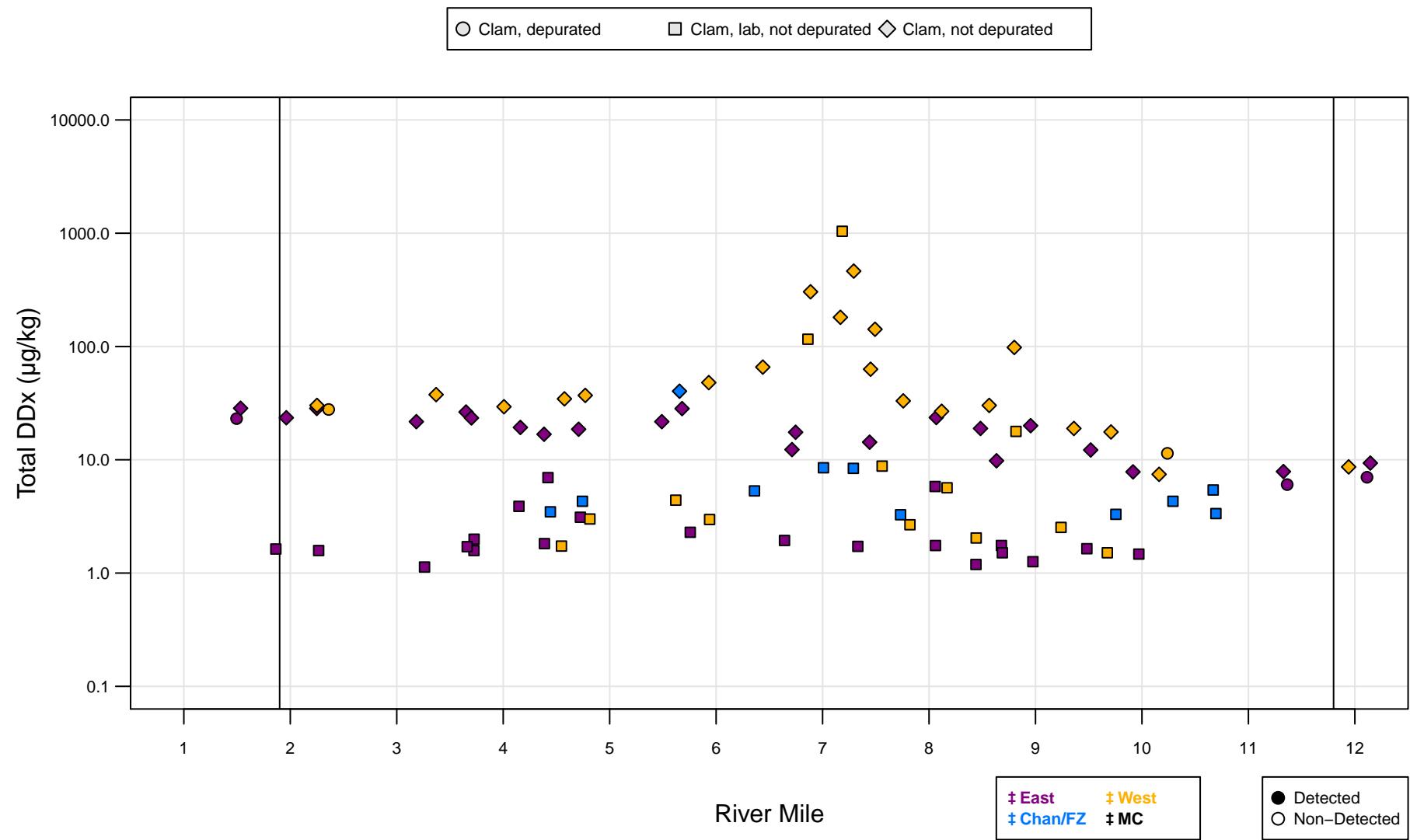


Figure 5.6–4a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total DDX in
 Tissue Samples by River Mile, RM 0.8–12.2

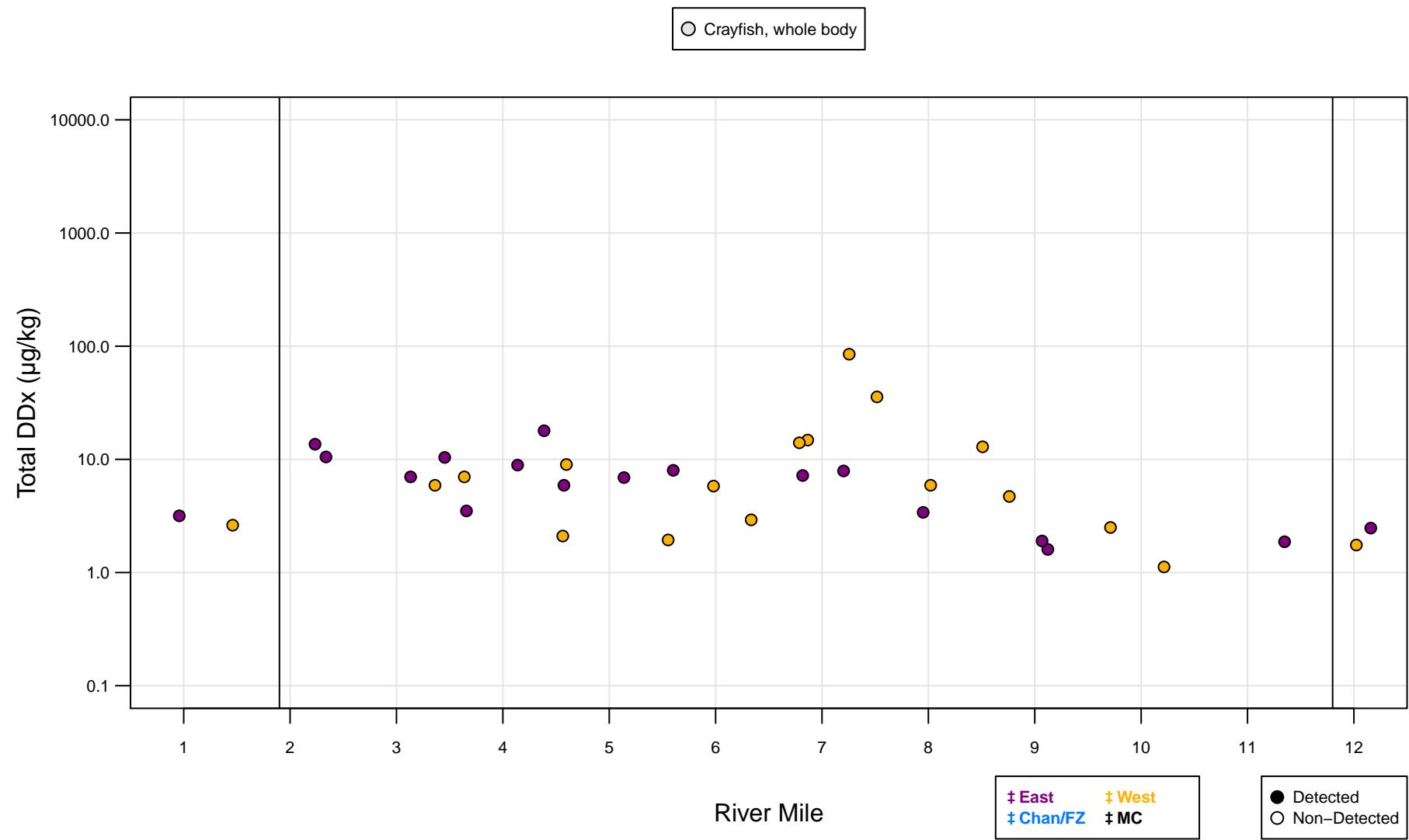


Figure 5.6–4b
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDX in
Tissue Samples by River Mile, RM 0.8–12.2

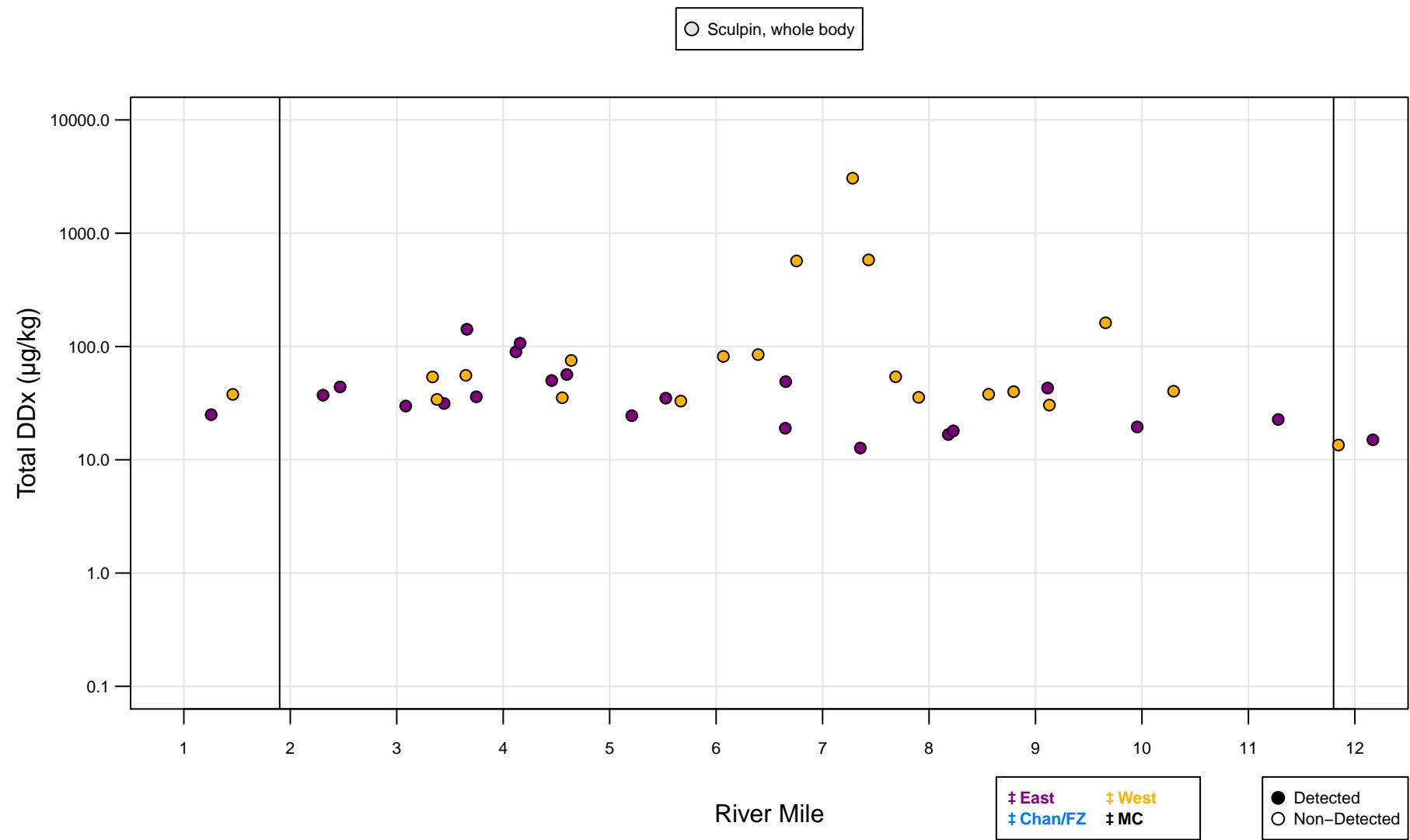


Figure 5.6-4c
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDx in
Tissue Samples by River Mile, RM 0.8-12.2

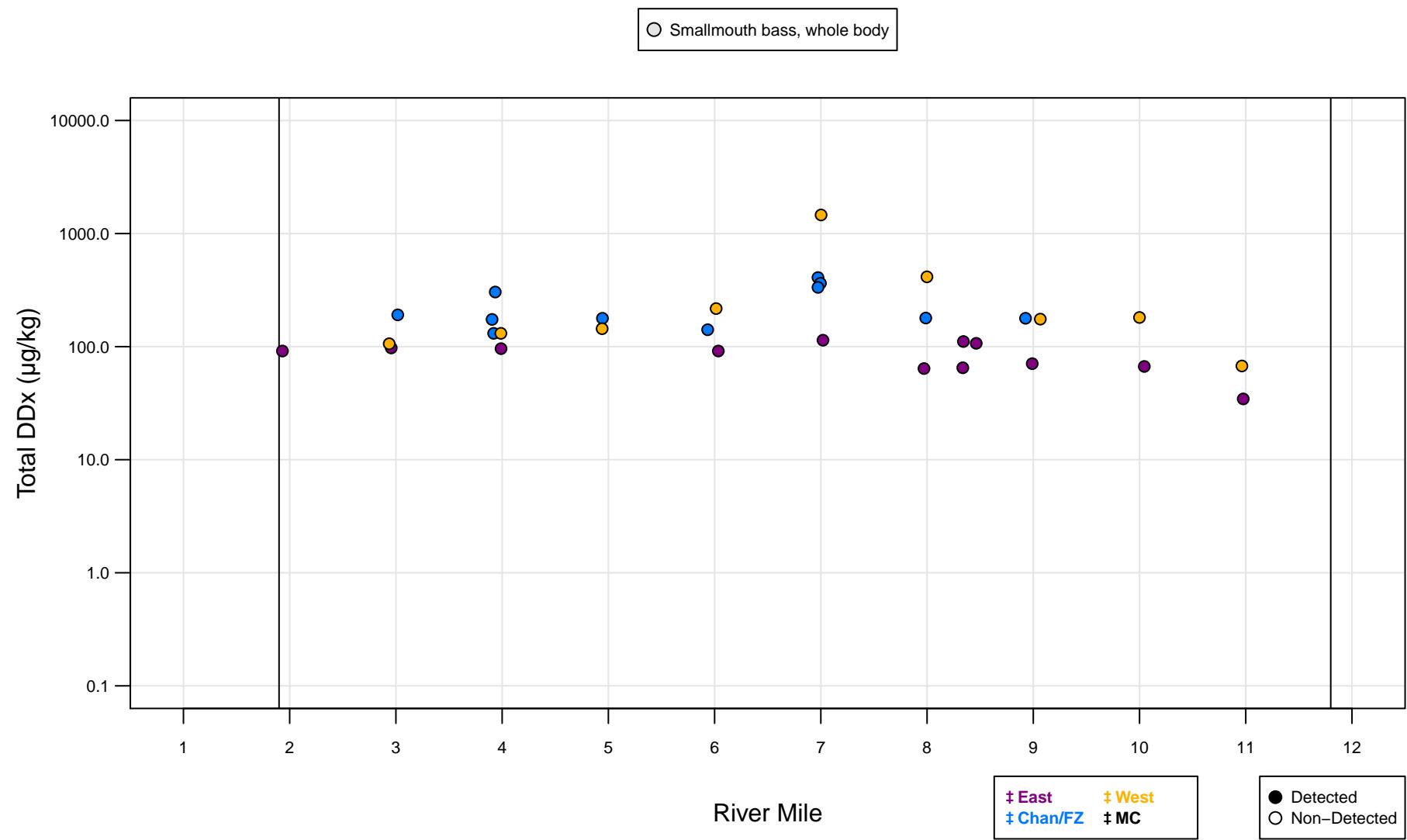


Figure 5.6–4d

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDX in
Tissue Samples by River Mile, RM 0.8–12.2

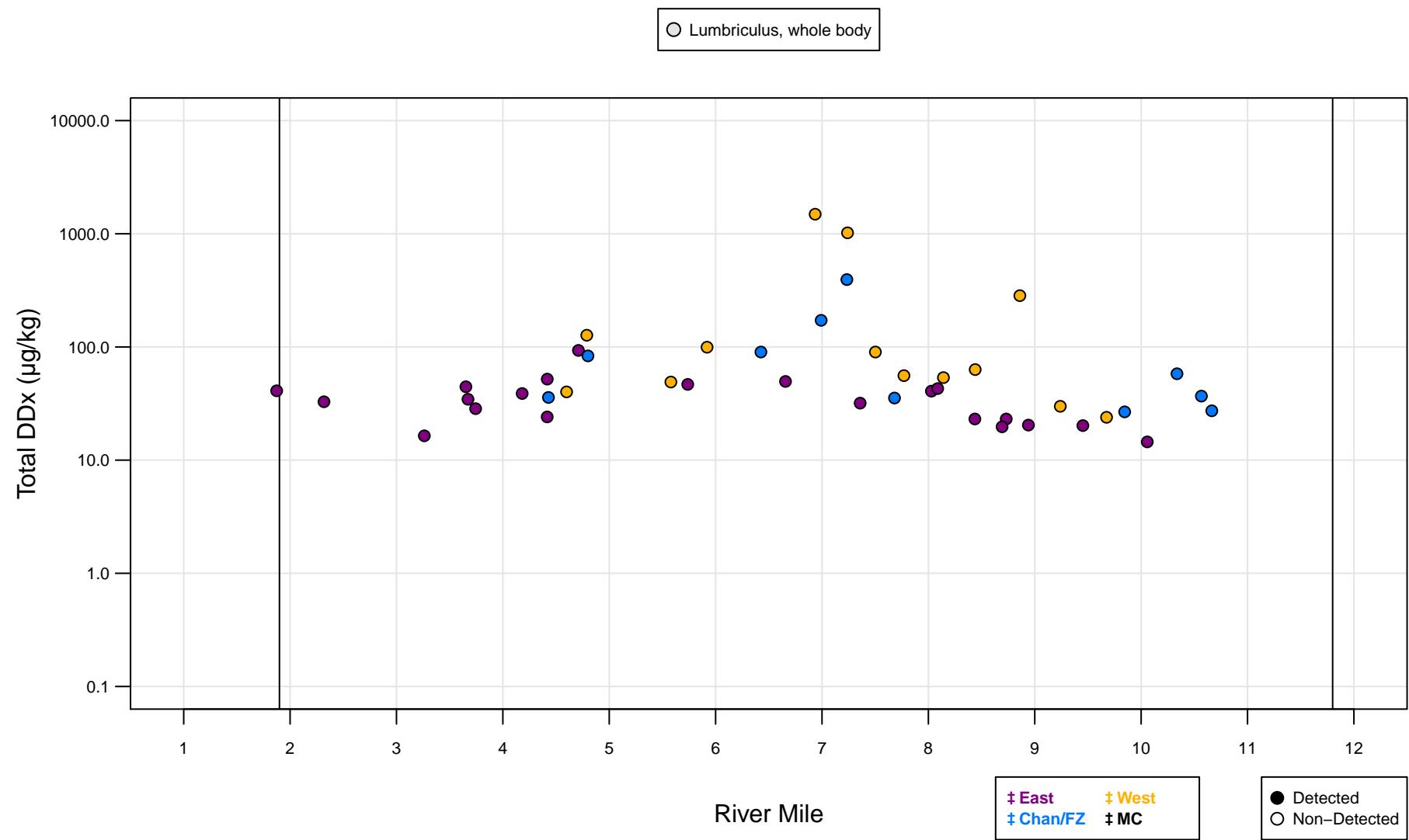


Figure 5.6–4e
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDX in
Tissue Samples by River Mile, RM 0.8–12.2

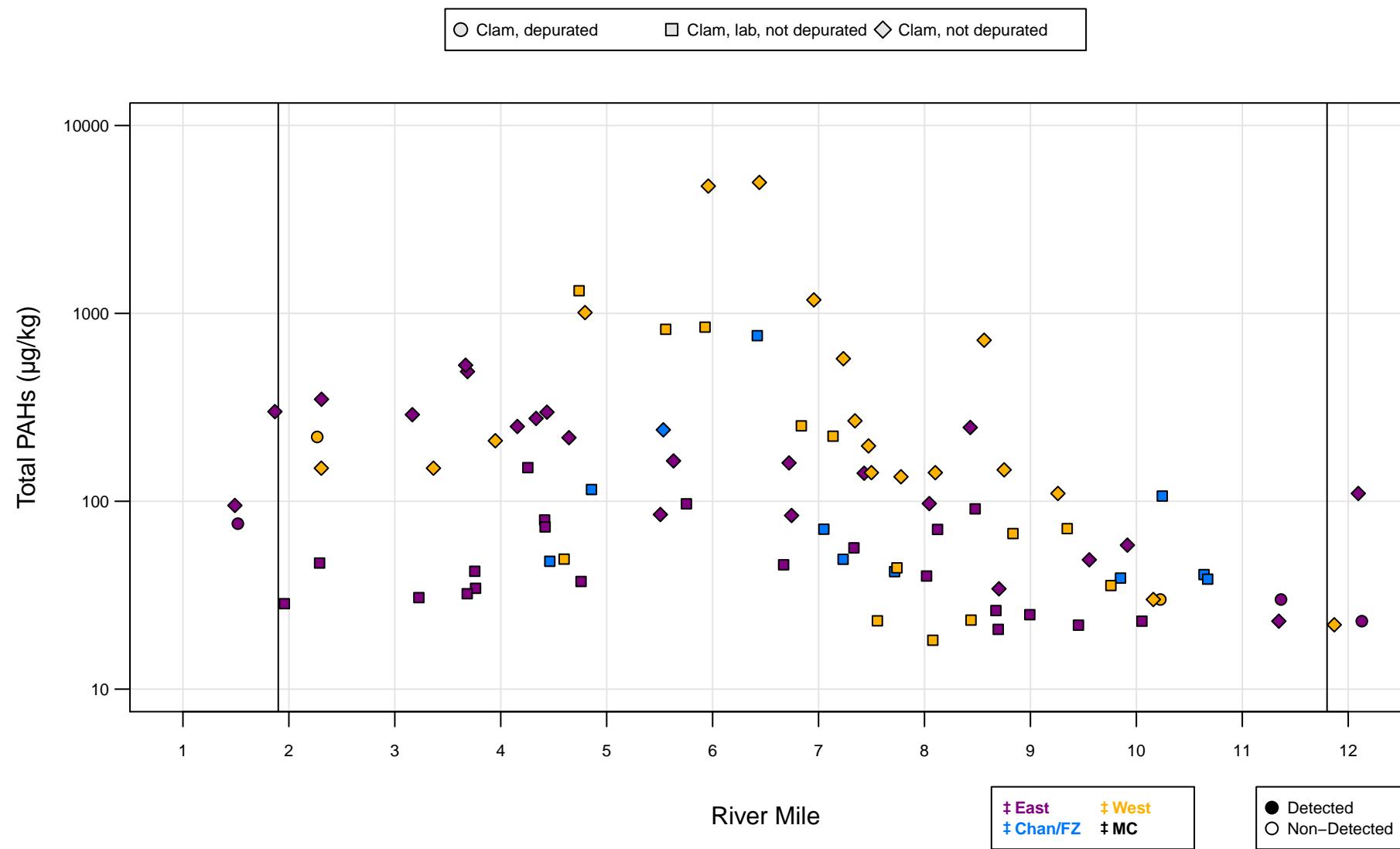


Figure 5.6-5

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total PAHs in
Tissue Samples by River Mile, RM 0.8–12.2

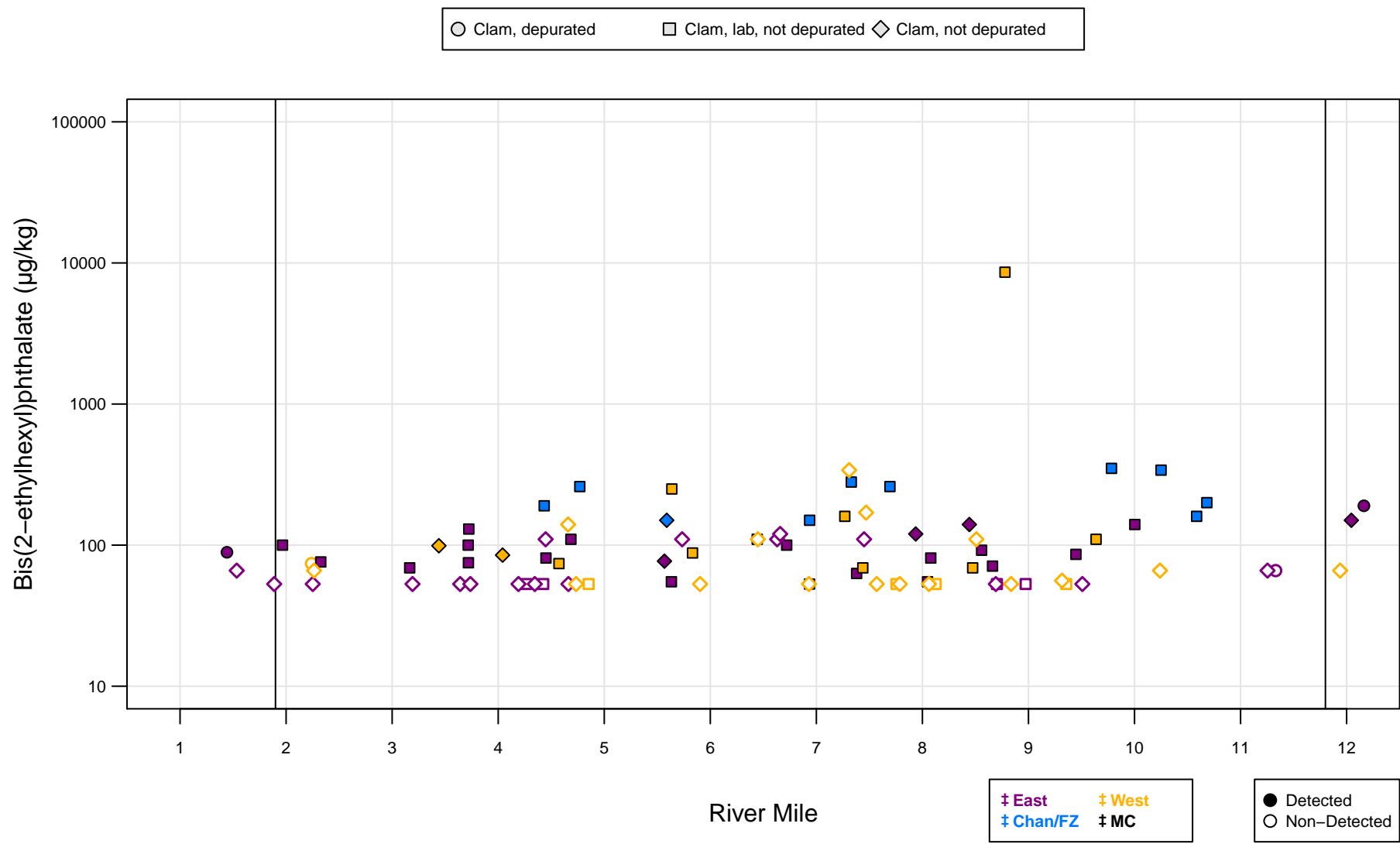


Figure 5.6–6a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Bis(2-ethylhexyl)phthalate in
 Tissue Samples by River Mile, RM 0.8–12.2

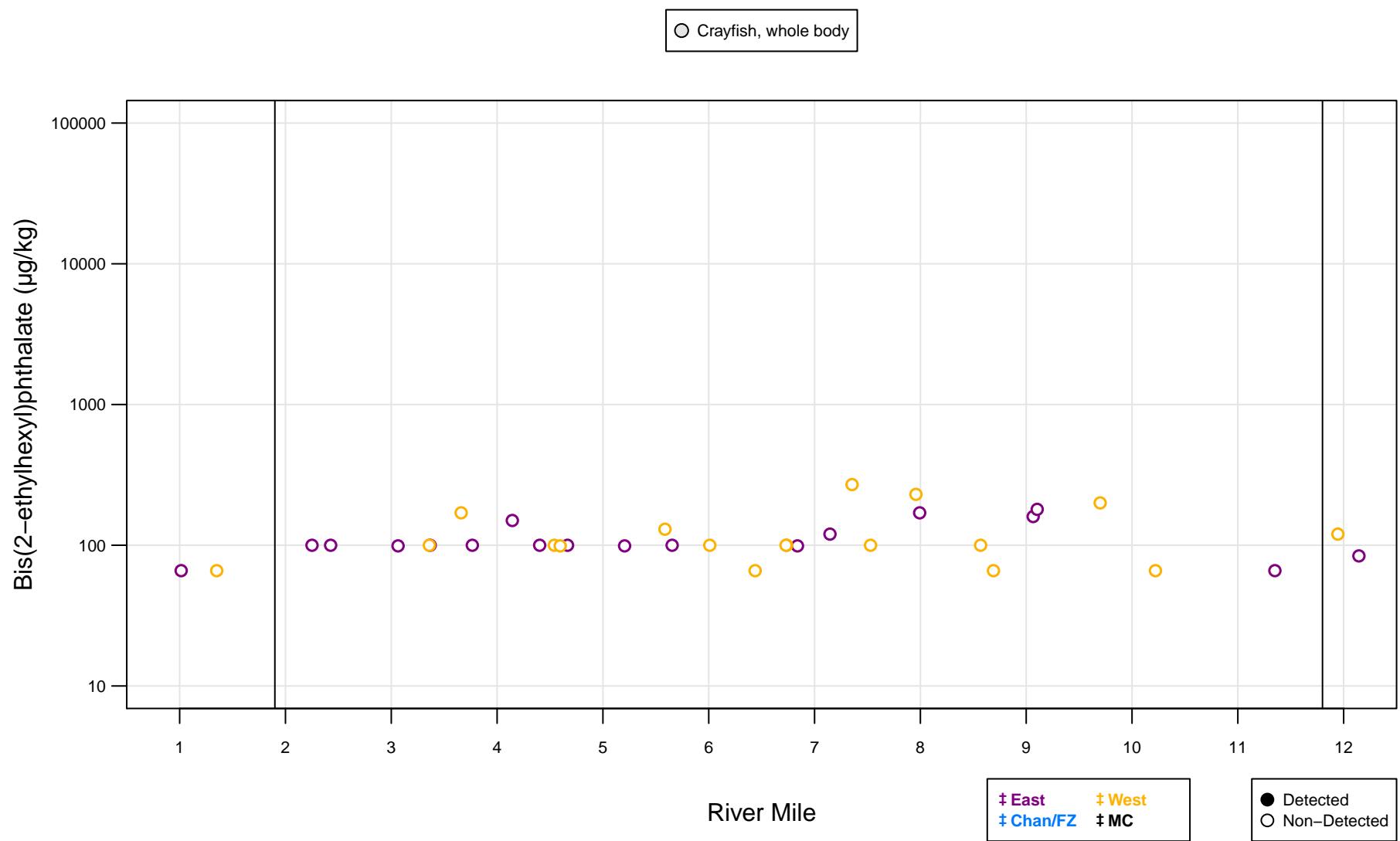


Figure 5.6-6b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Bis(2-ethylhexyl)phthalate in
Tissue Samples by River Mile, RM 0.8–12.2

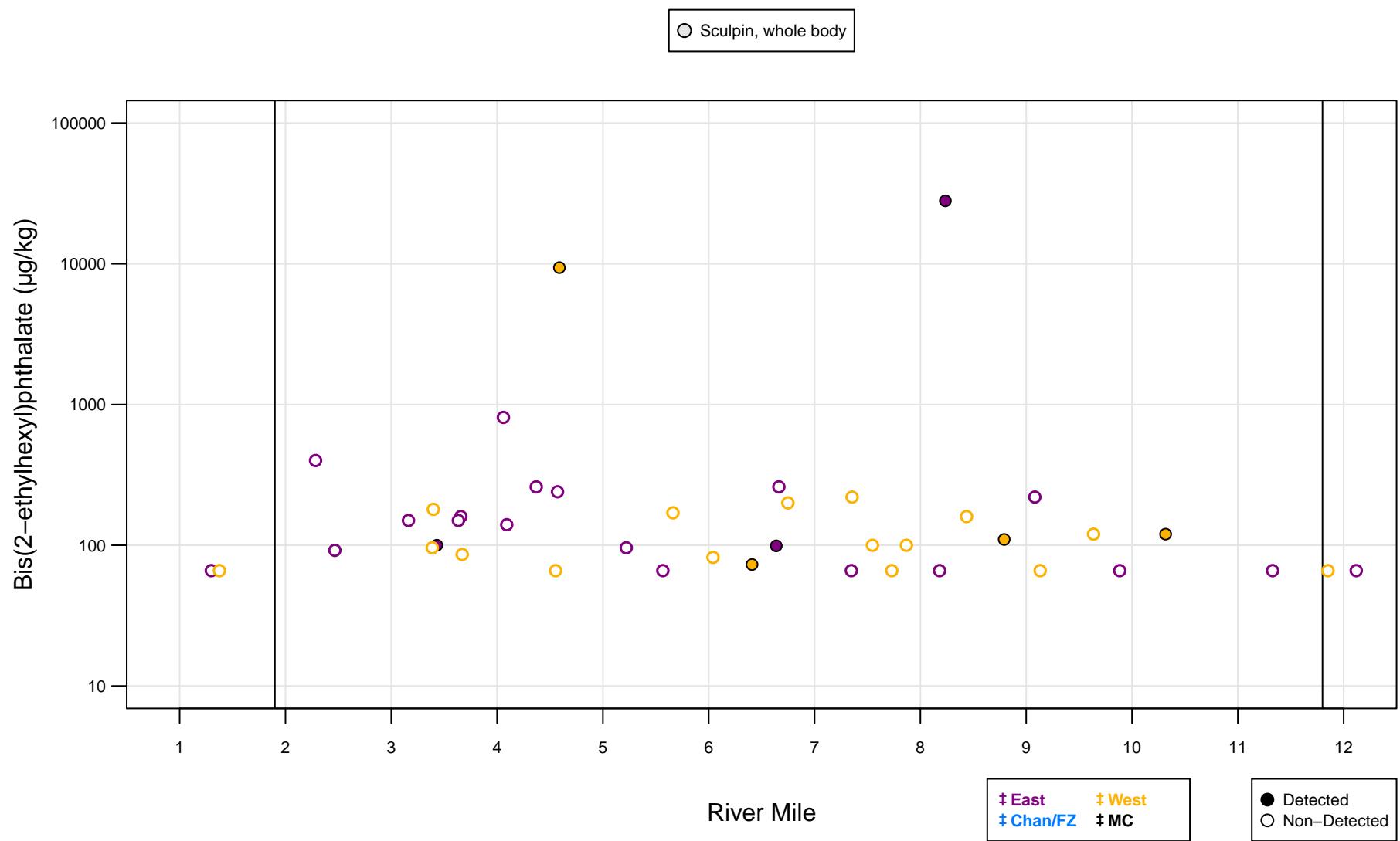


Figure 5.6-6c

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Bis(2-ethylhexyl)phthalate in
Tissue Samples by River Mile, RM 0.8–12.2

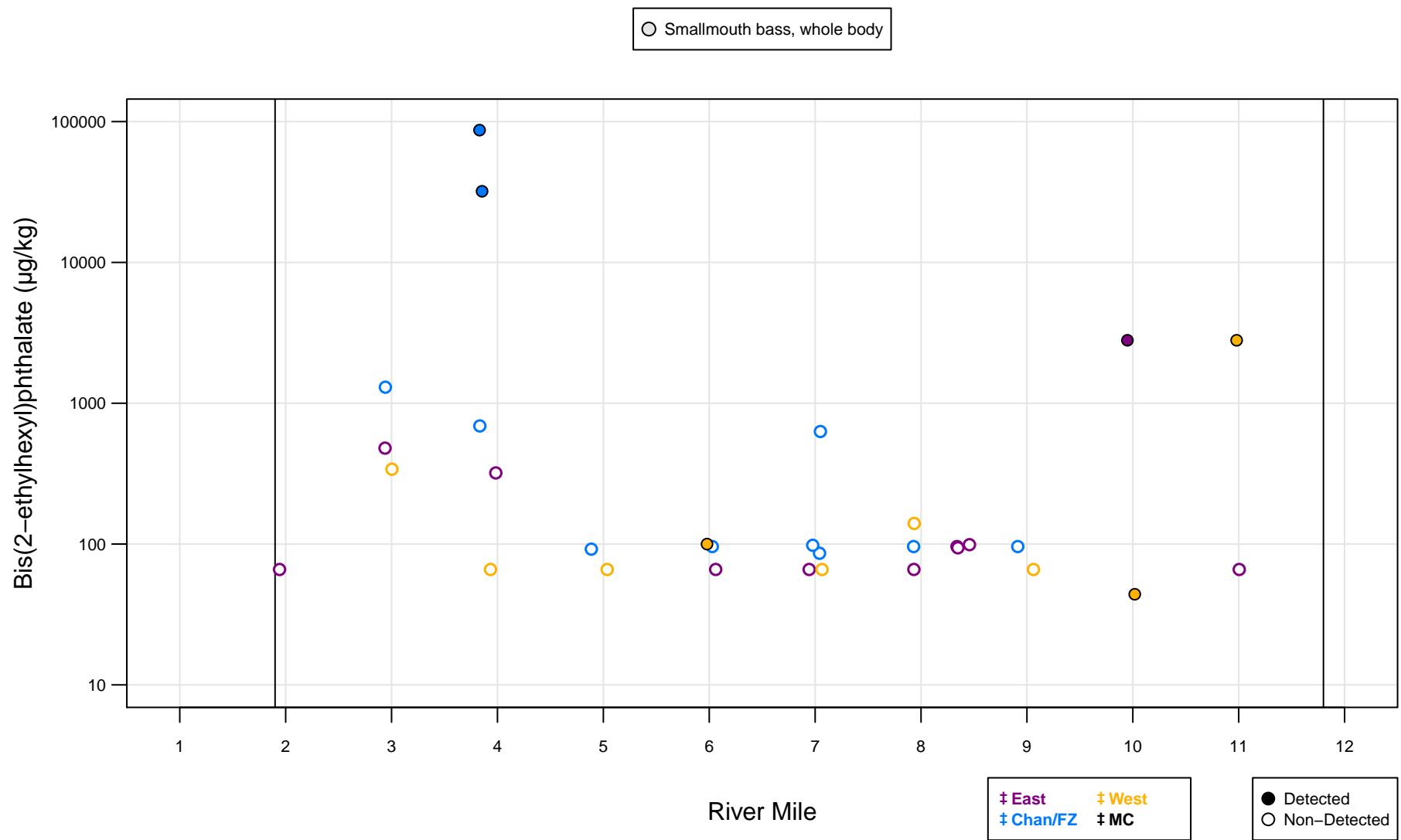


Figure 5.6-6d

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Bis(2-ethylhexyl)phthalate in
Tissue Samples by River Mile, RM 0.8–12.2

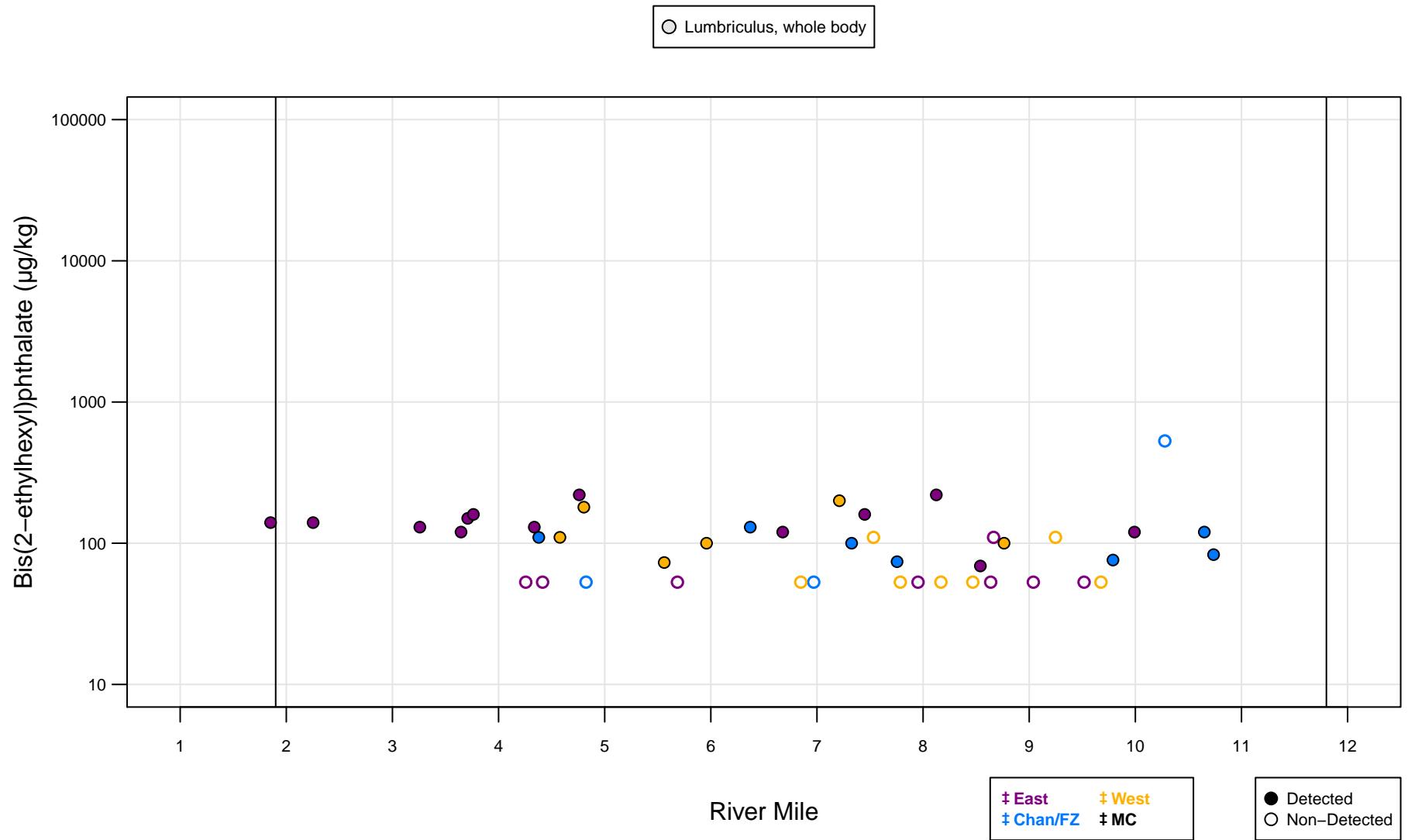


Figure 5.6–6e

Portland Harbor RI/FS

Remedial Investigation Report

Scatter Plot of Bis(2-ethylhexyl)phthalate in Tissue Samples by River Mile, RM 0.8-12.2

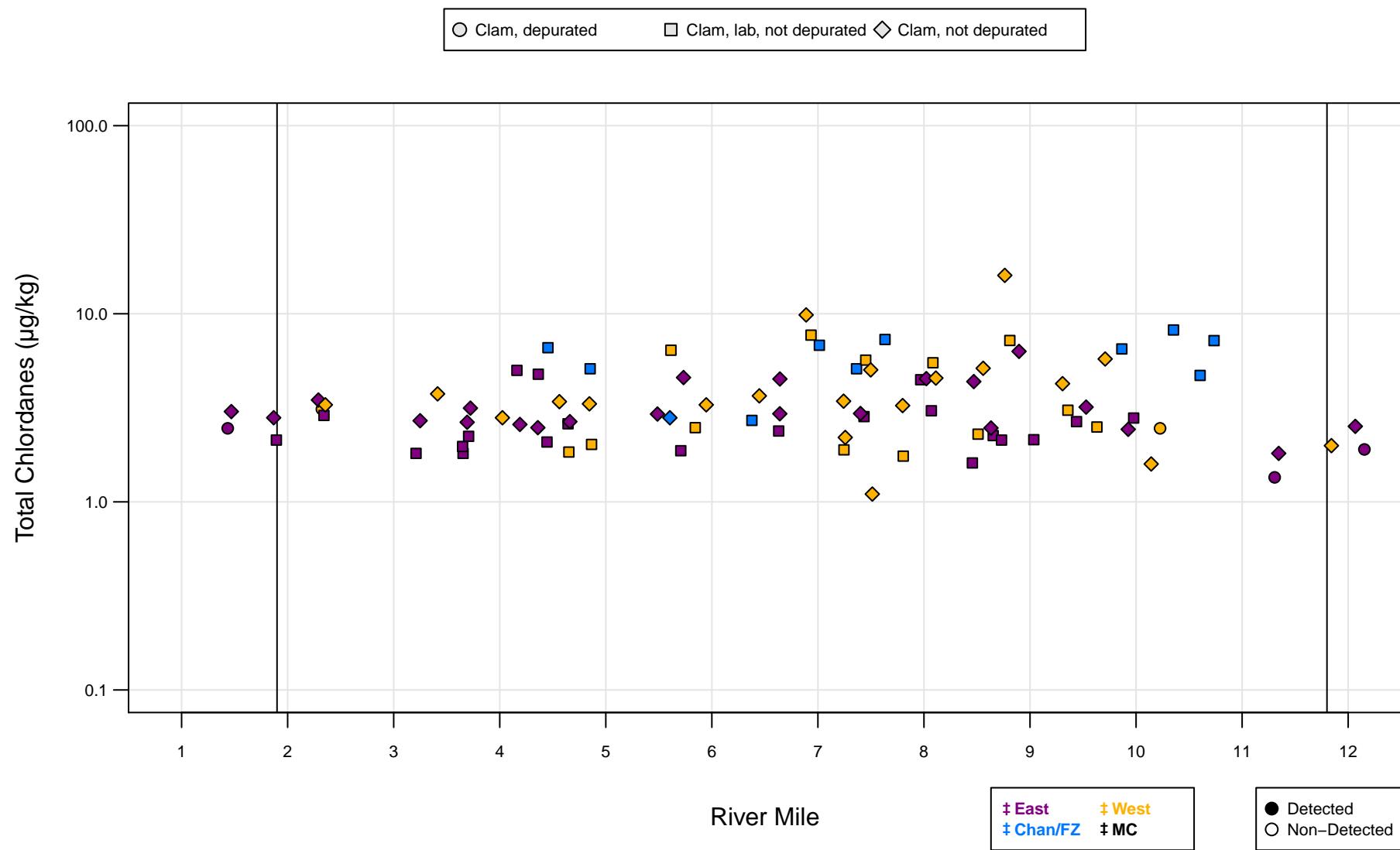


Figure 5.6-7a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Total Chlordanes in
 Tissue Samples by River Mile, RM 0.8–12.2

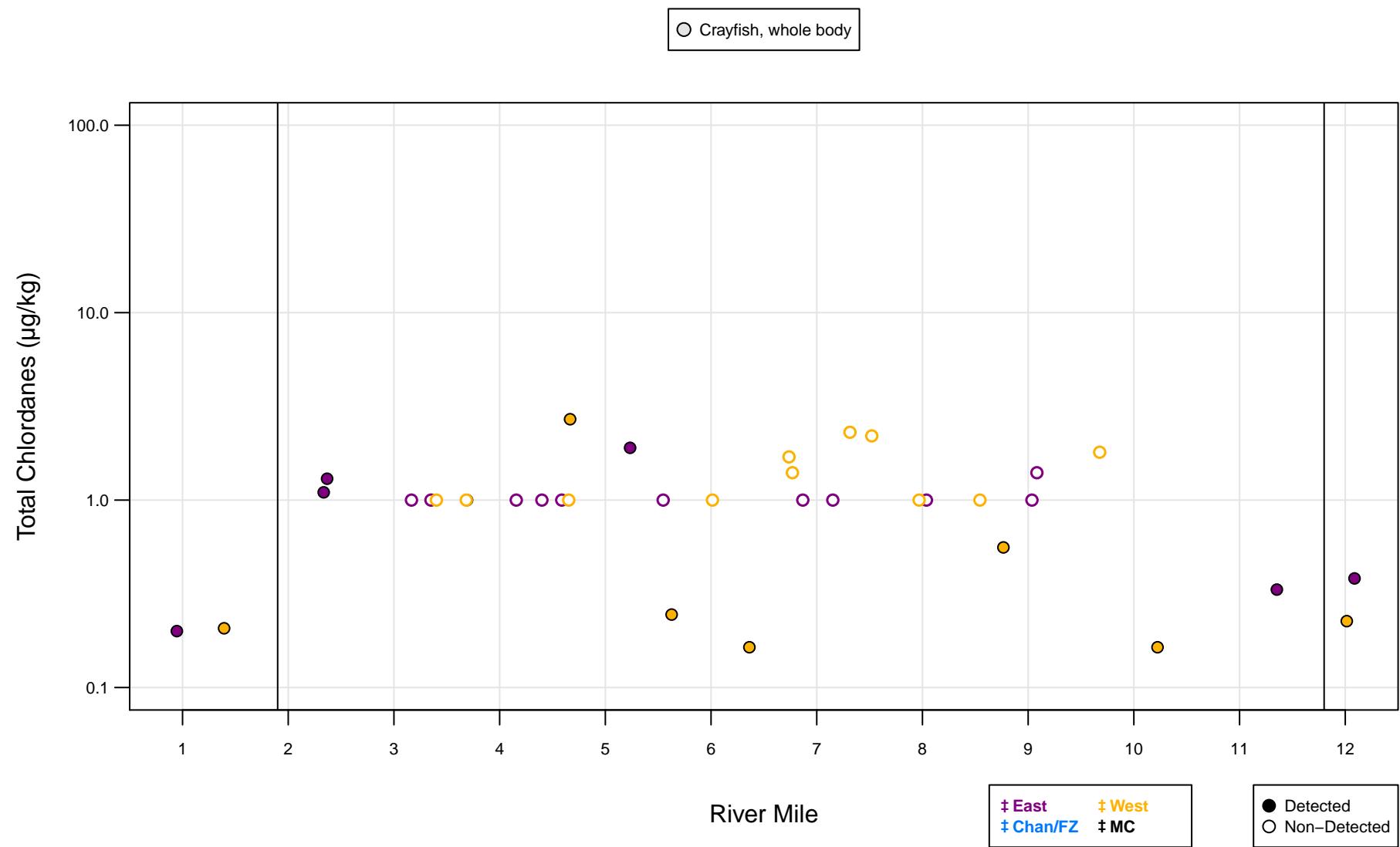


Figure 5.6–7b
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Chlordanes in
Tissue Samples by River Mile, RM 0.8–12.2

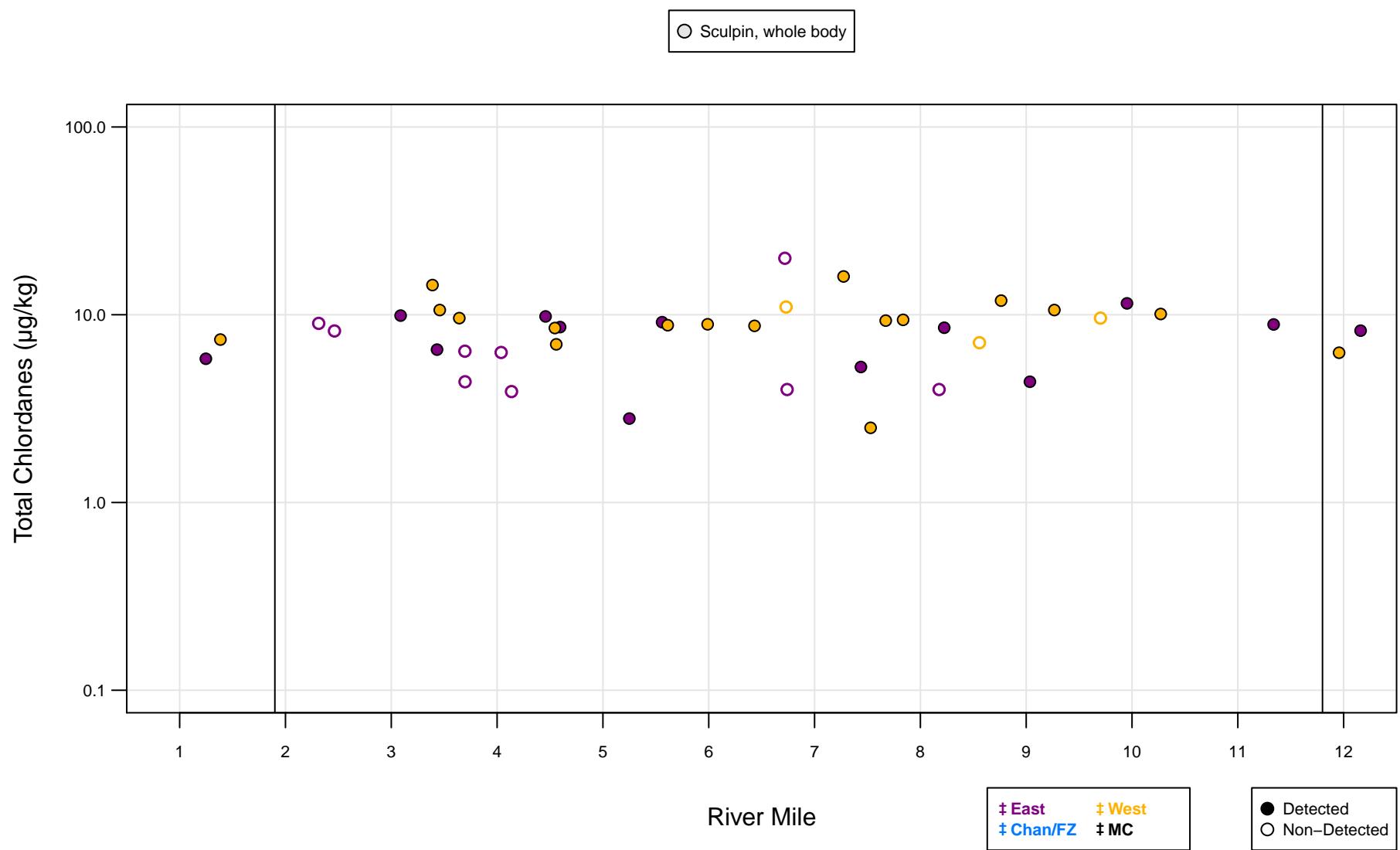


Figure 5.6–7c

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Chlordanes in
Tissue Samples by River Mile, RM 0.8–12.2

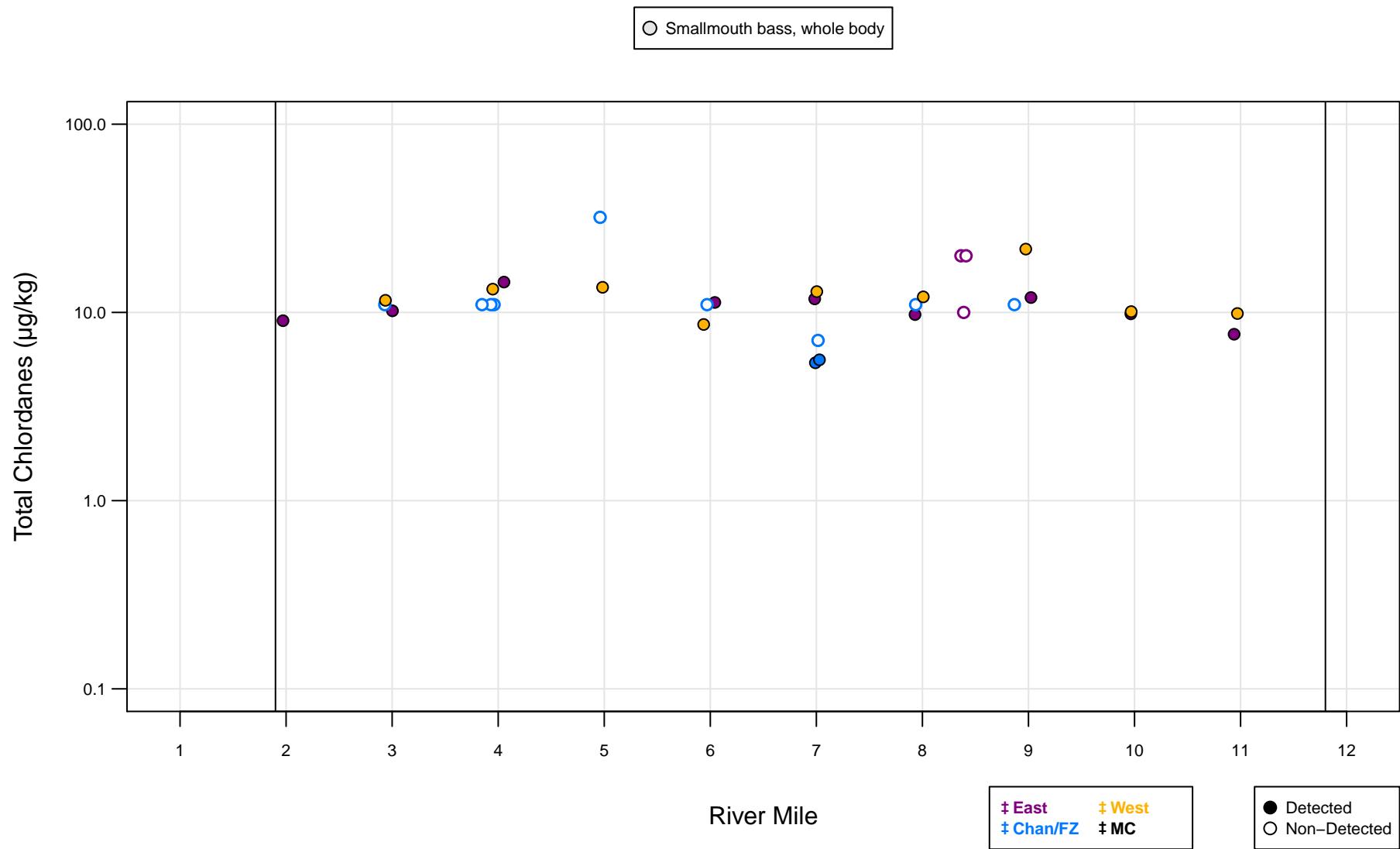


Figure 5.6–7d

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Chlordanes in
Tissue Samples by River Mile, RM 0.8–12.2

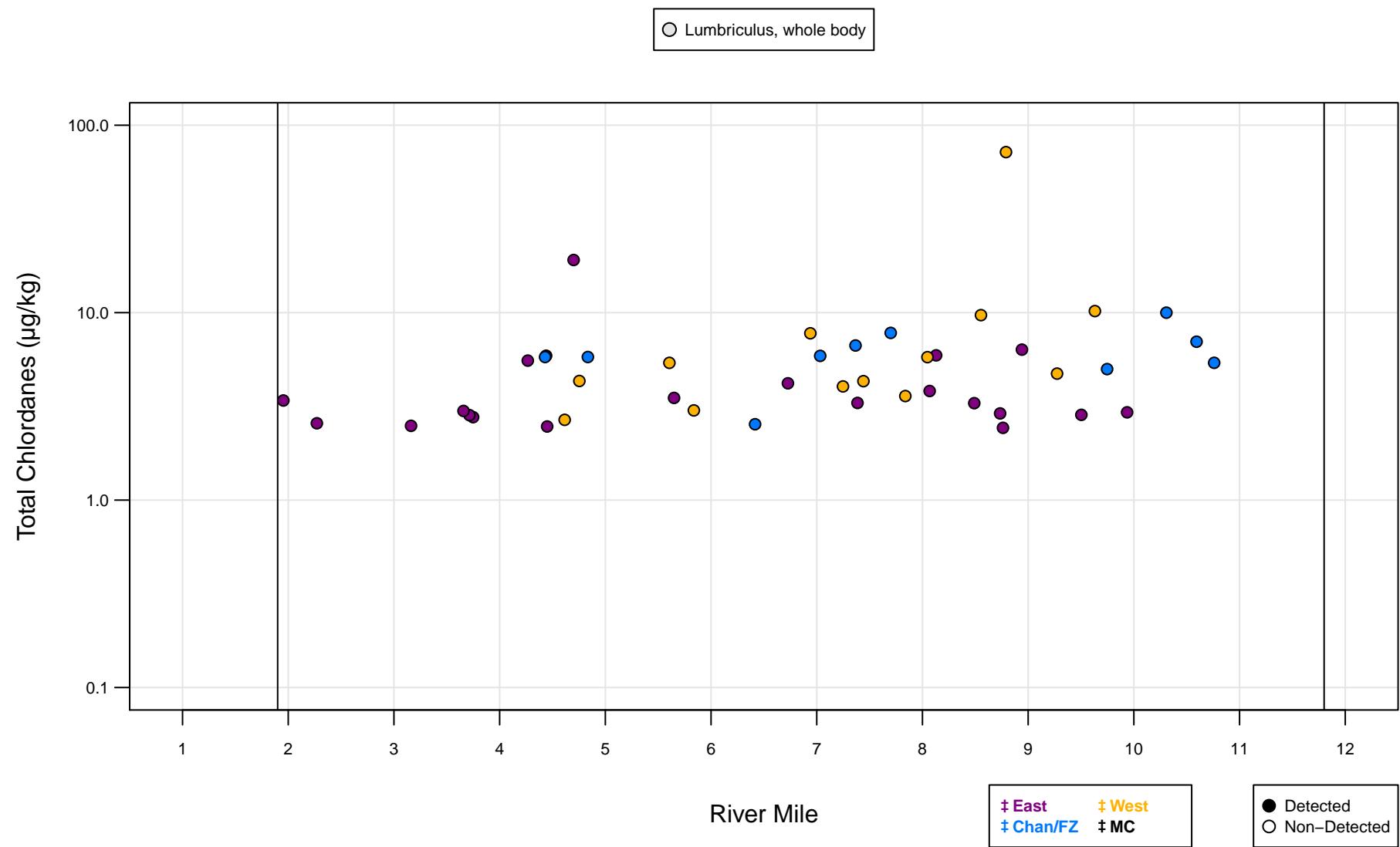


Figure 5.6–7e

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Chlordanes in
Tissue Samples by River Mile, RM 0.8–12.2

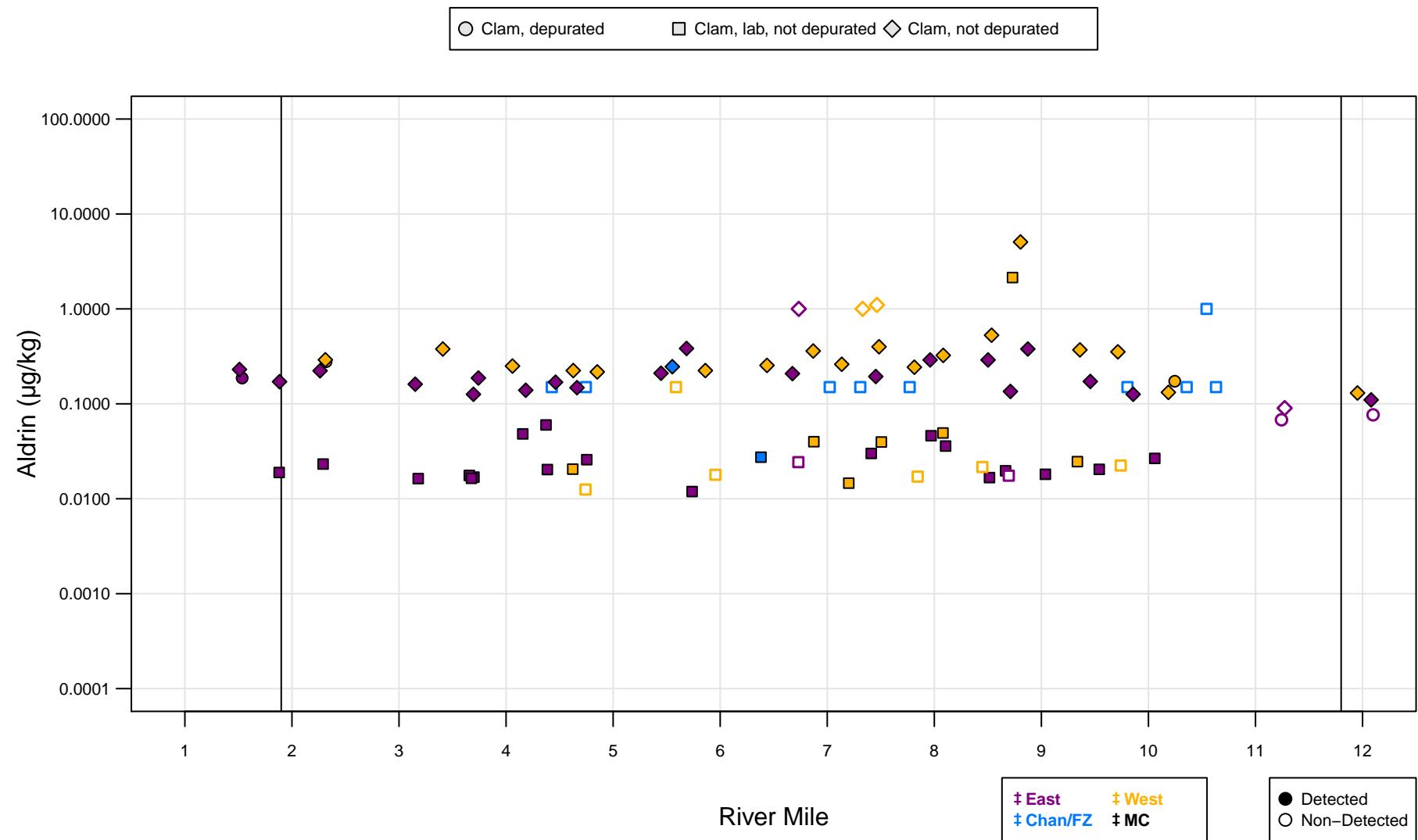


Figure 5.6-8a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Aldrin in
 Tissue Samples by River Mile, RM 0.8–12.2

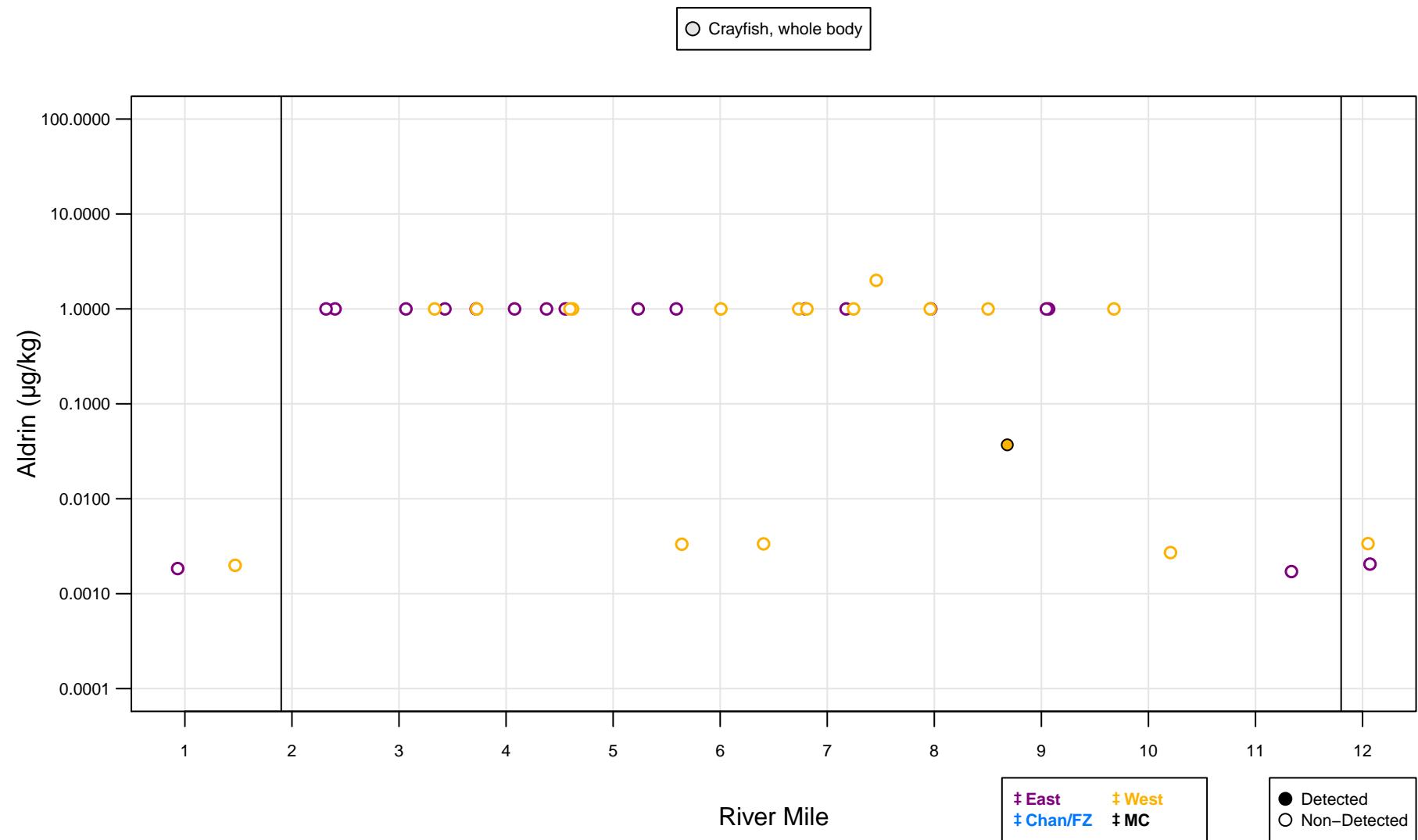


Figure 5.6–8b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Aldrin in
Tissue Samples by River Mile, RM 0.8–12.2

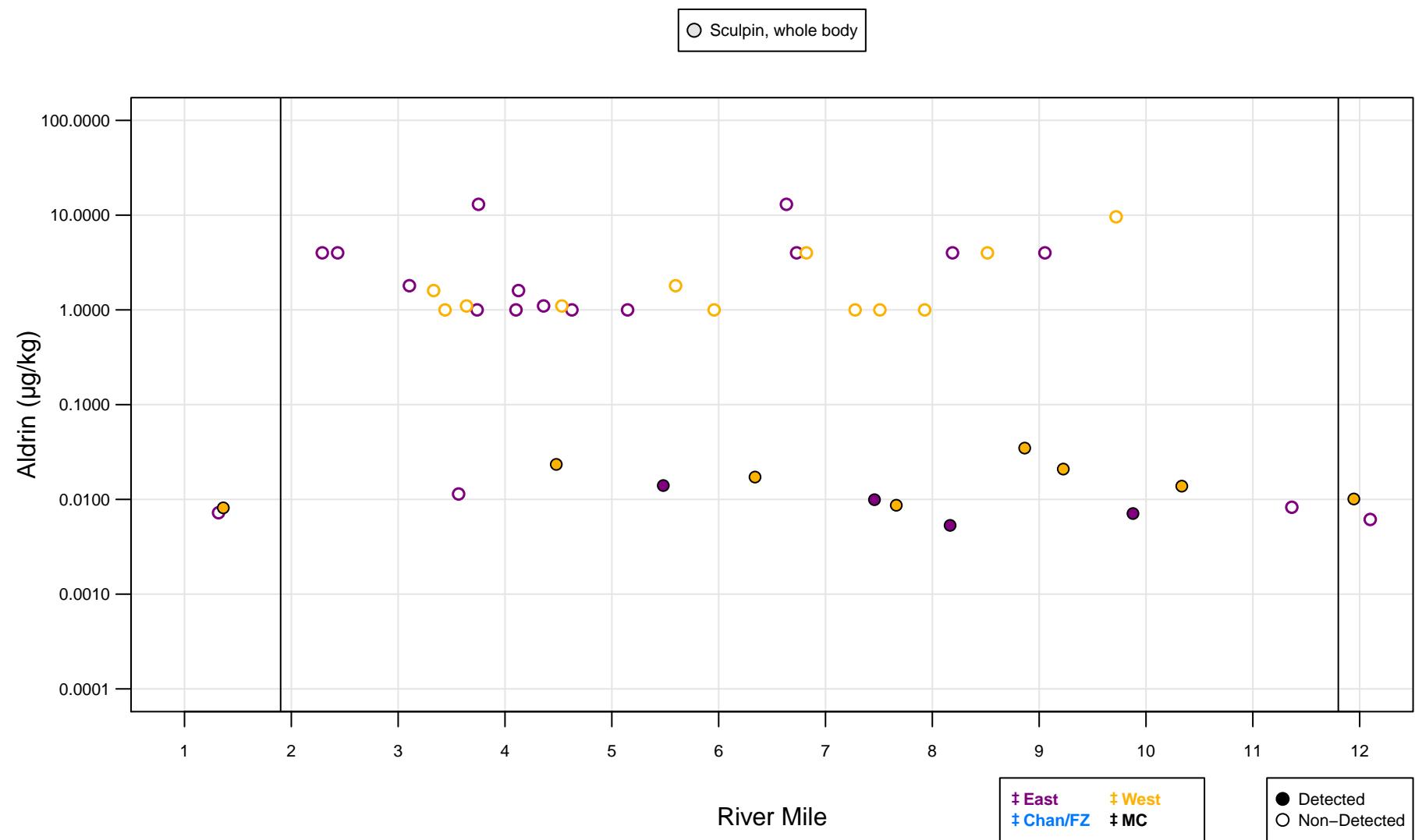


Figure 5.6-8c

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Aldrin in
Tissue Samples by River Mile, RM 0.8–12.2

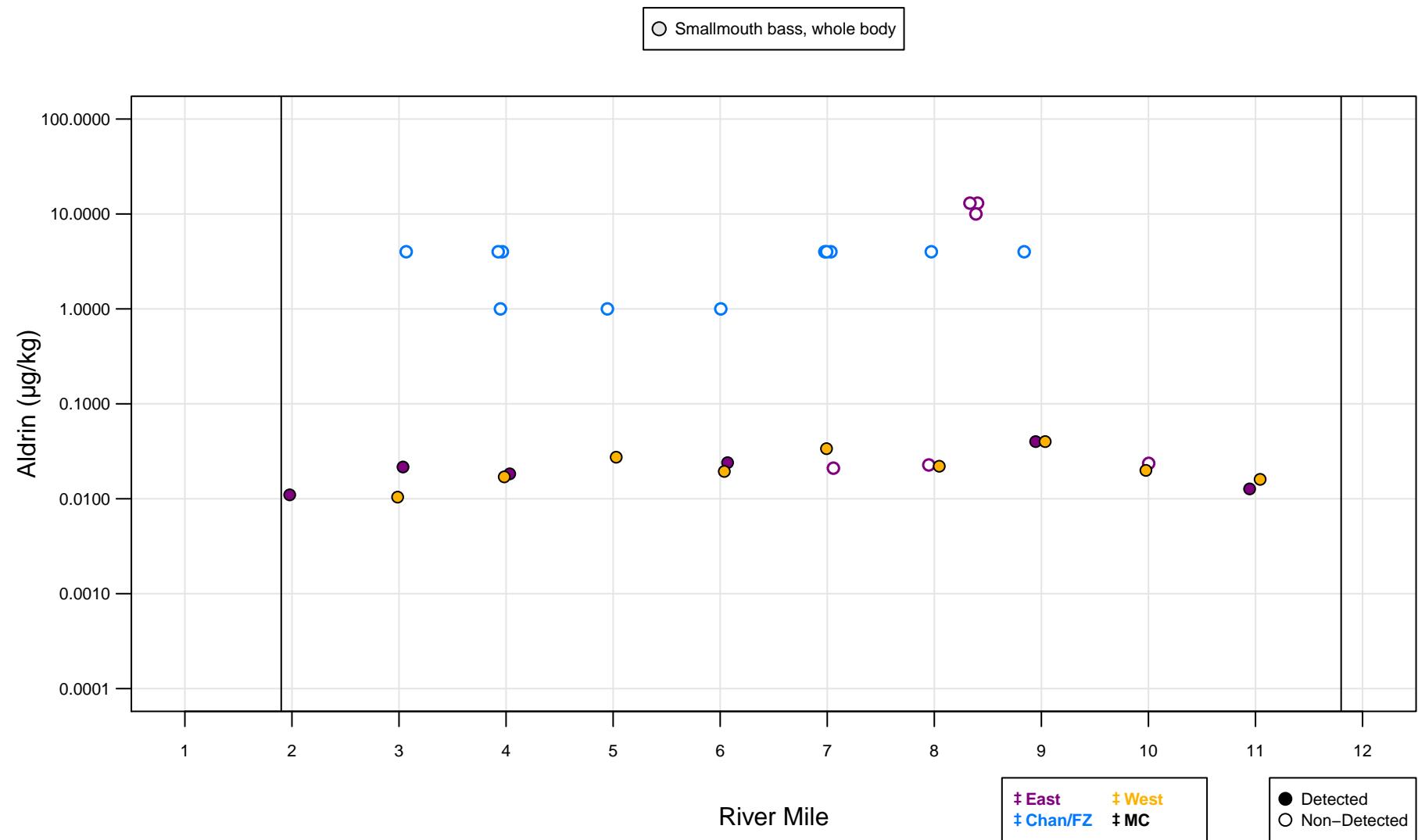


Figure 5.6–8d
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Aldrin in
Tissue Samples by River Mile, RM 0.8–12.2

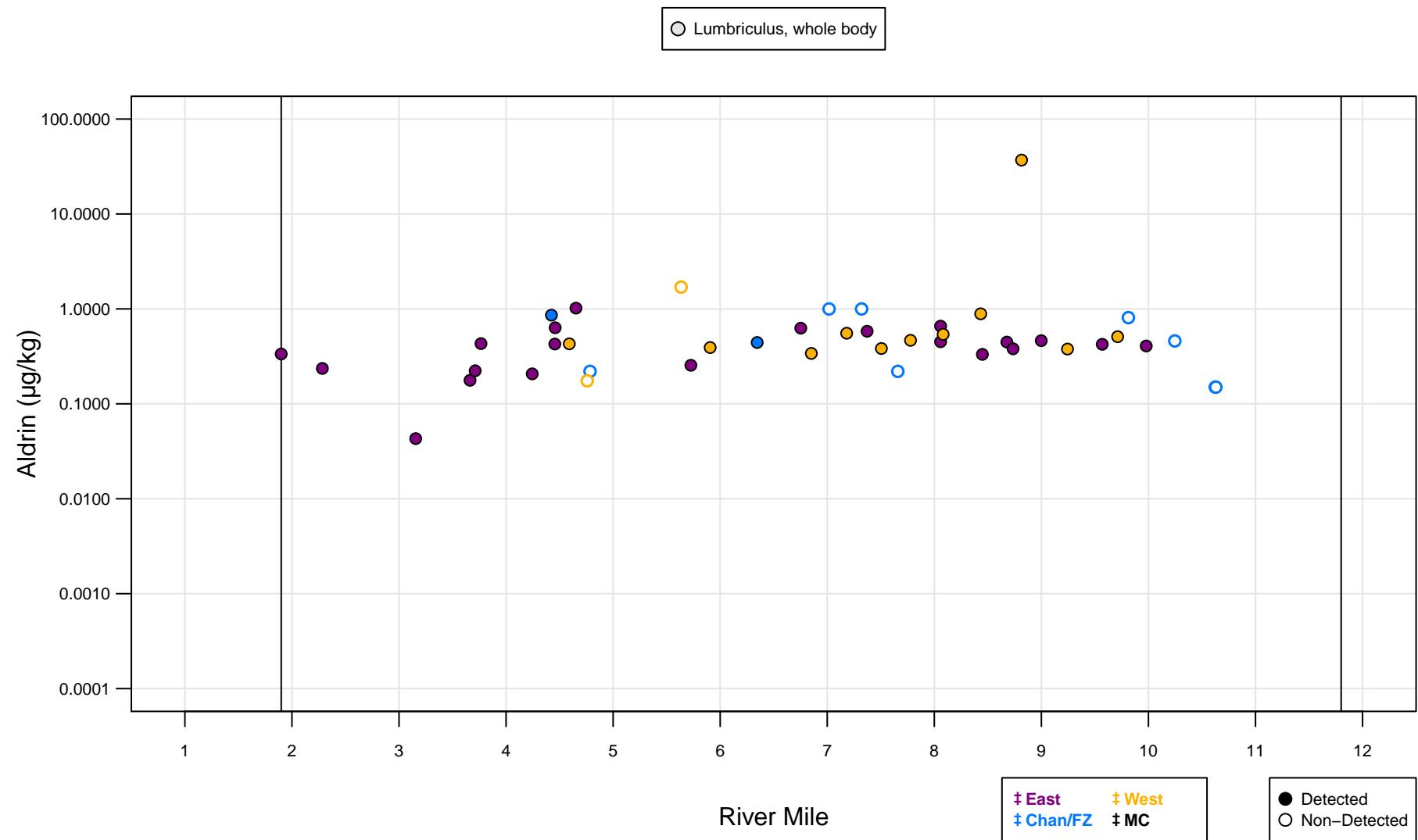


Figure 5.6-8e

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Aldrin in
Tissue Samples by River Mile, RM 0.8–12.2

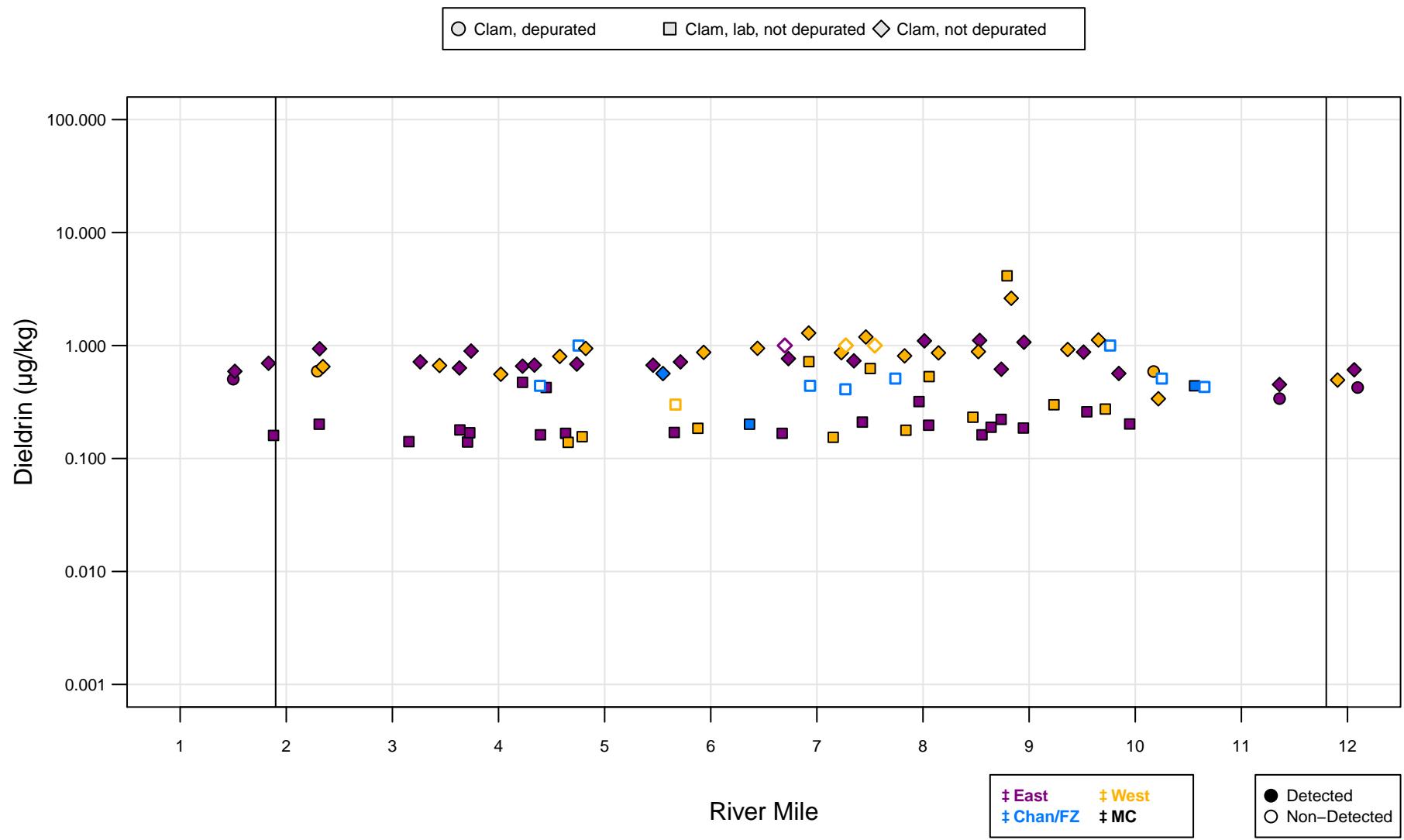


Figure 5.6–9a

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Dieldrin in
Tissue Samples by River Mile, RM 0.8–12.2

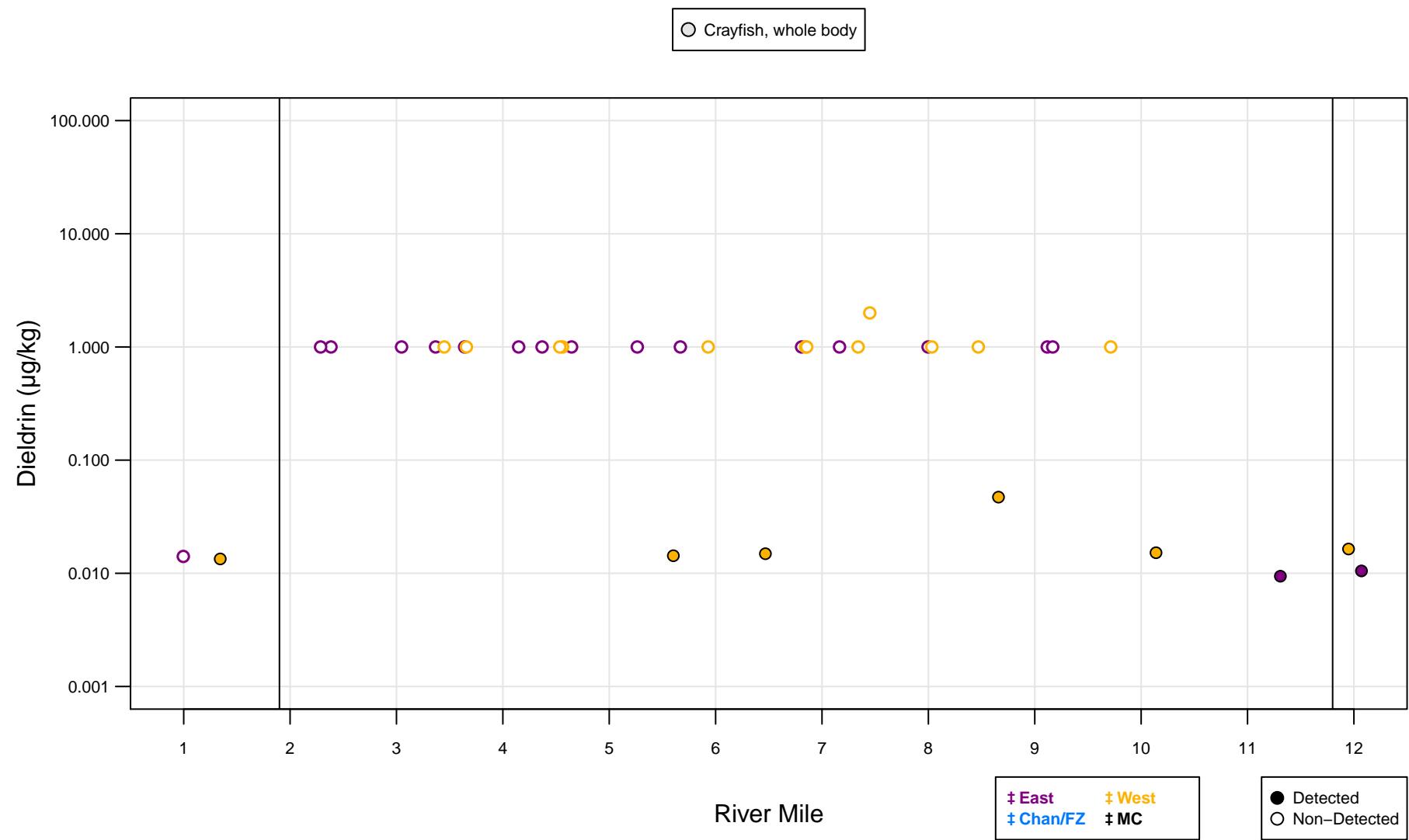


Figure 5.6–9b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Dieldrin in
Tissue Samples by River Mile, RM 0.8–12.2

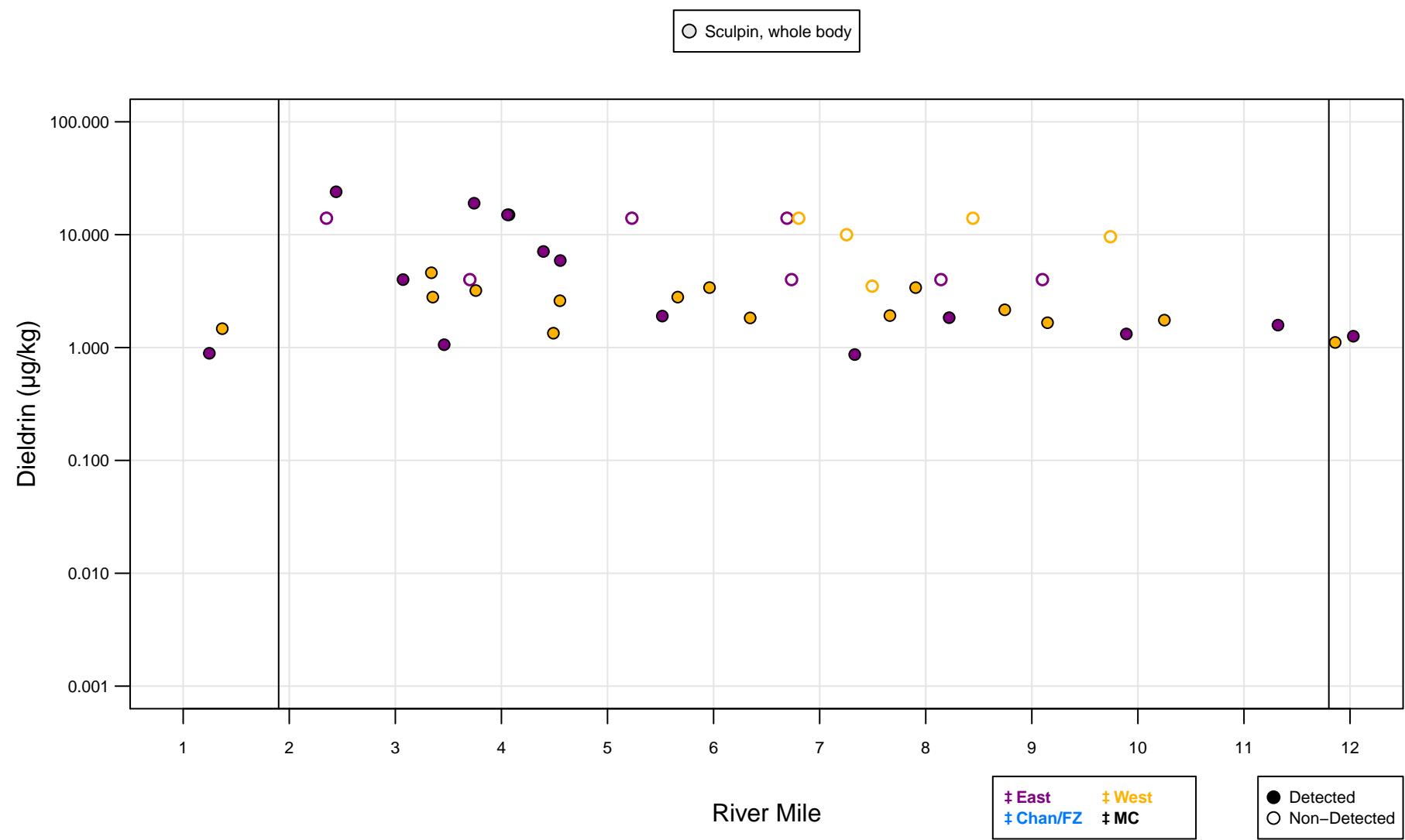


Figure 5.6-9c
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Dieldrin in
Tissue Samples by River Mile, RM 0.8–12.2

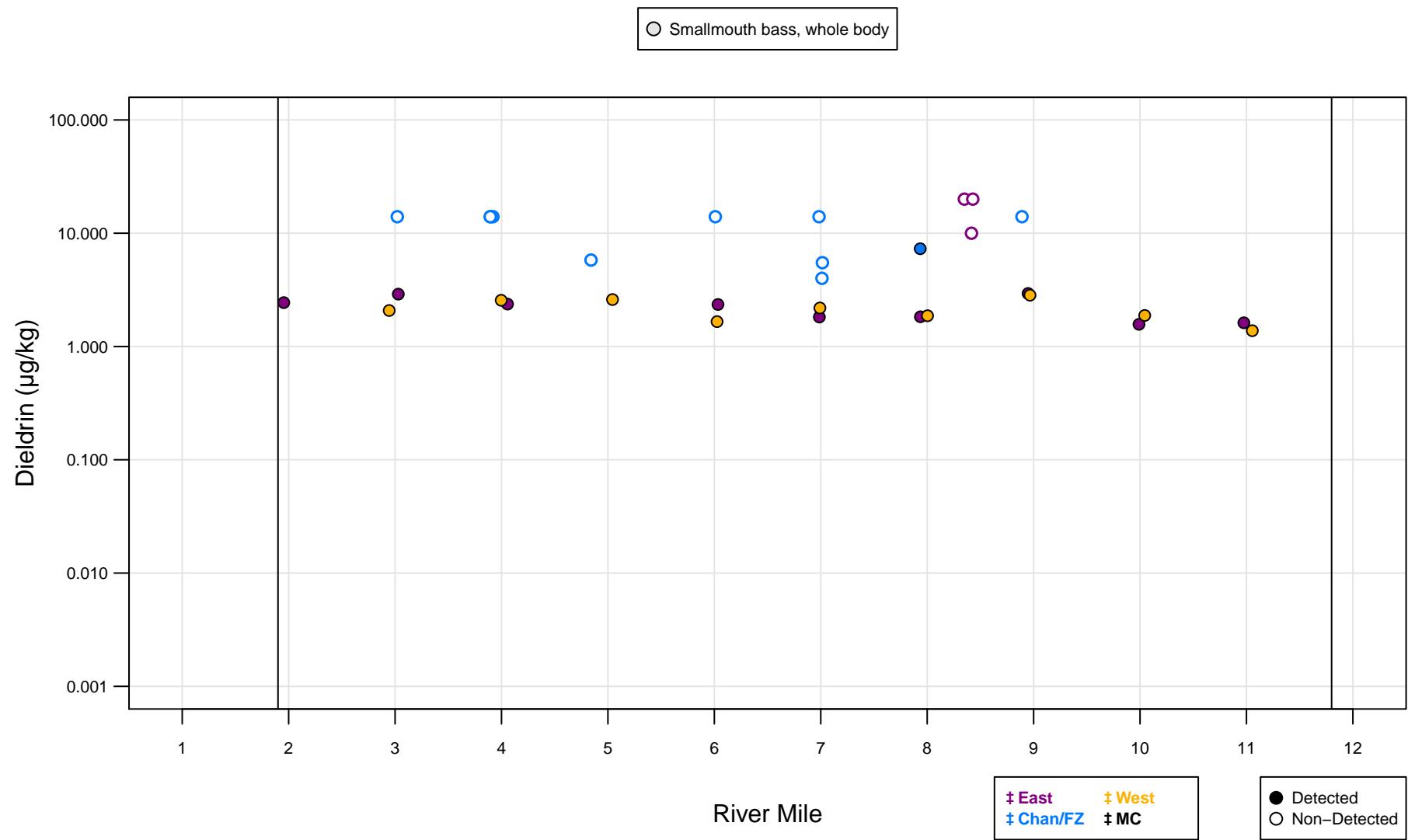


Figure 5.6–9d

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Dieldrin in
Tissue Samples by River Mile, RM 0.8–12.2

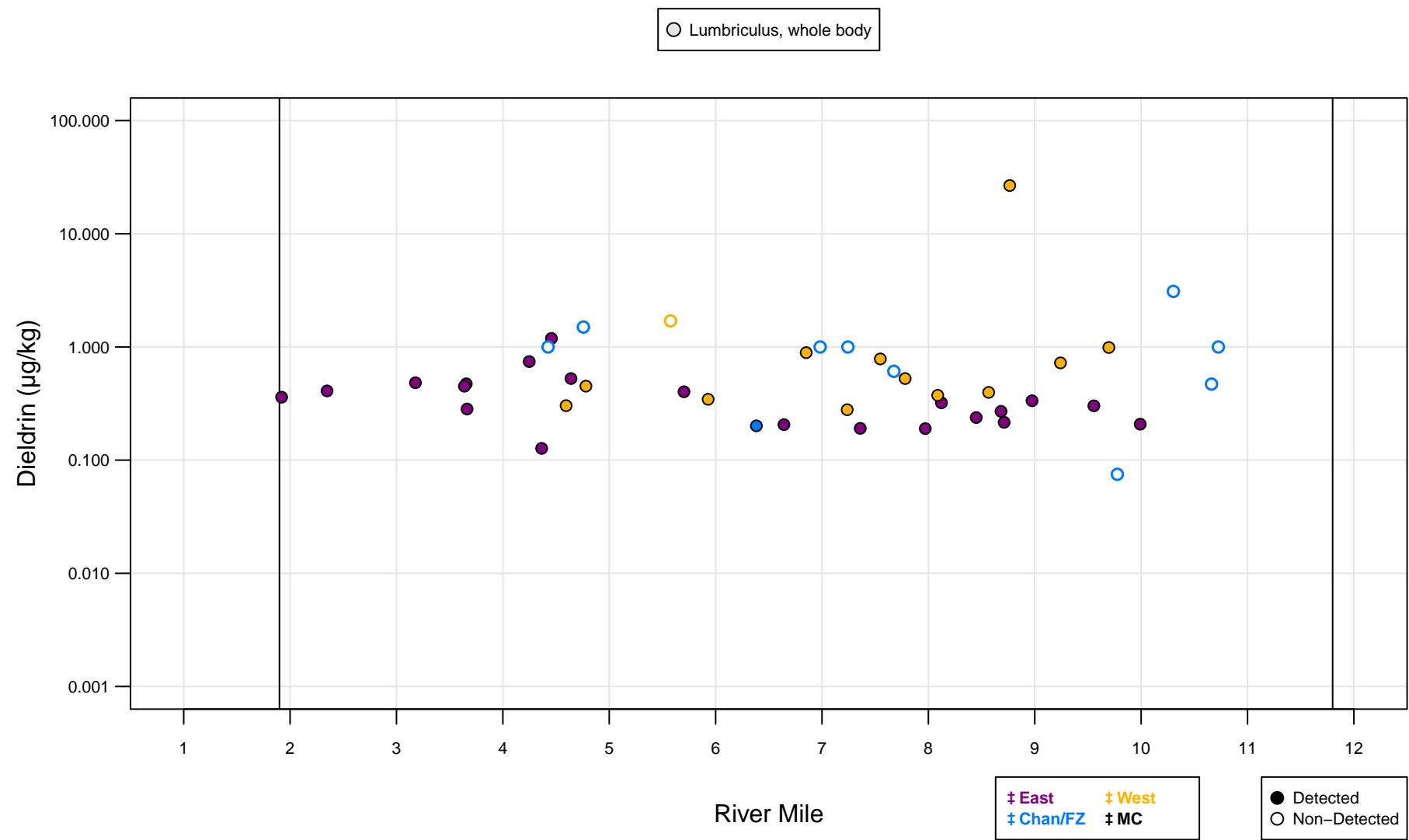


Figure 5.6–9e

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Dieldrin in
Tissue Samples by River Mile, RM 0.8–12.2

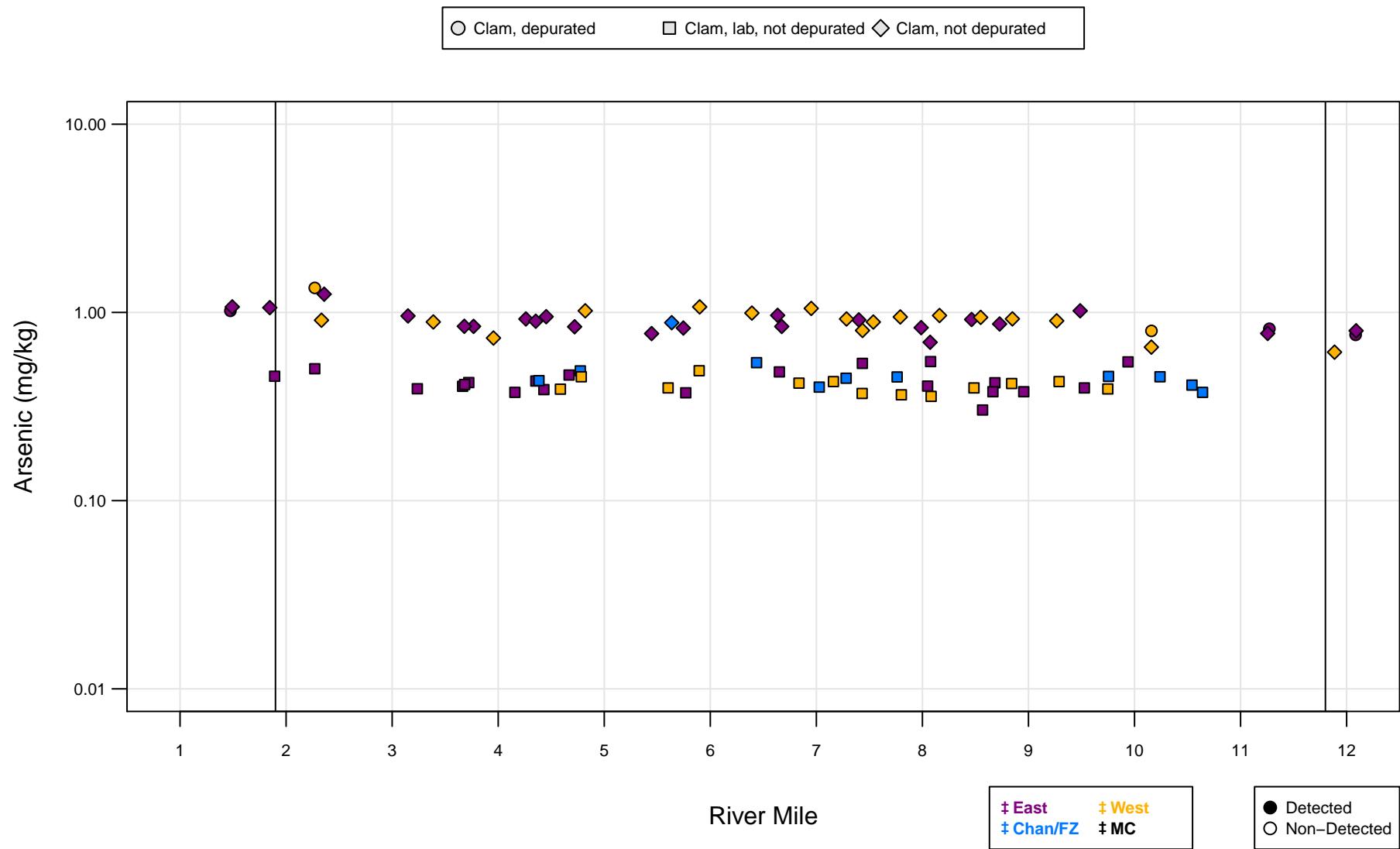


Figure 5.6–10a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Arsenic in
 Tissue Samples by River Mile, RM 0.8–12.2

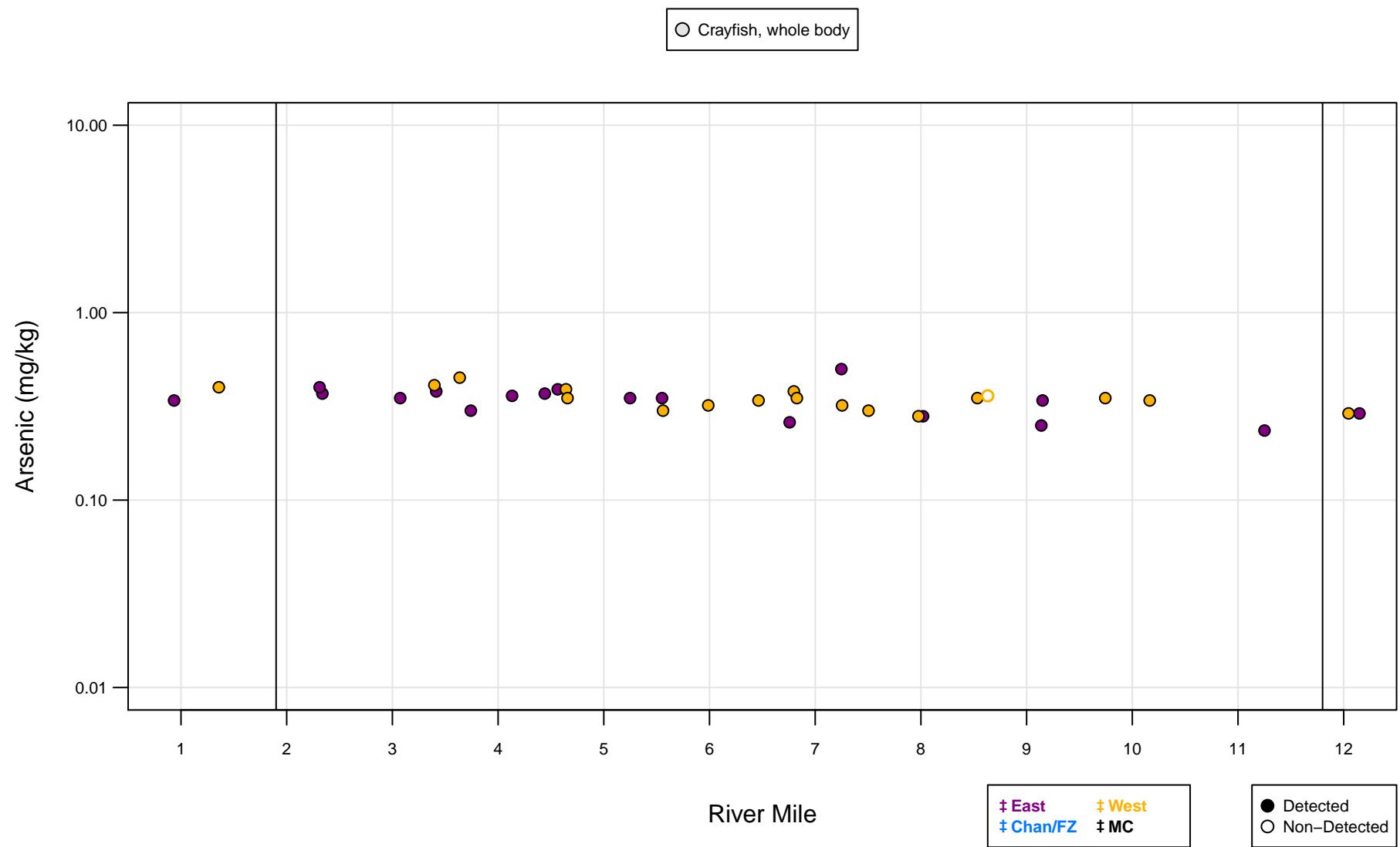


Figure 5.6–10b
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Arsenic in
 Tissue Samples by River Mile, RM 0.8–12.2

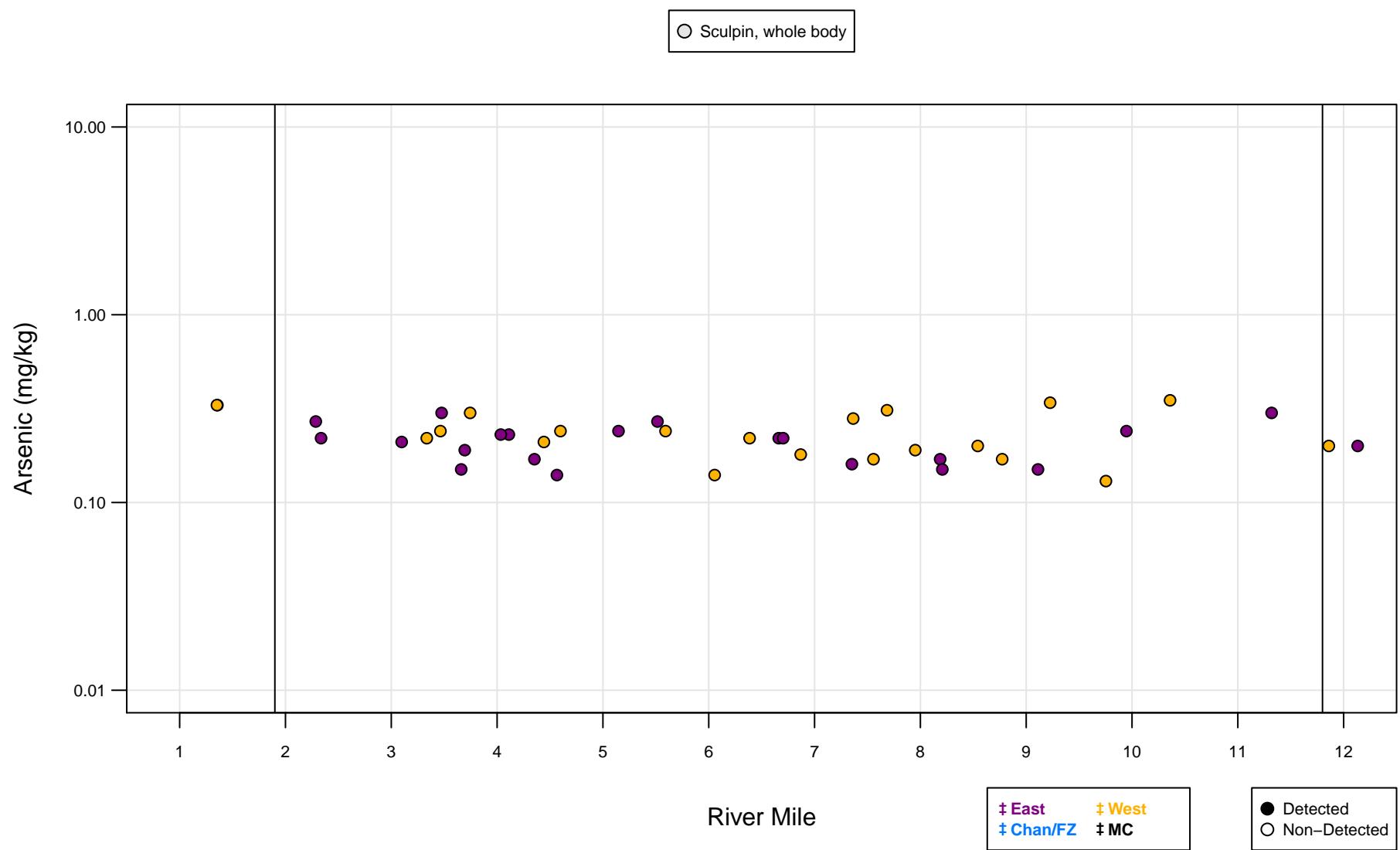


Figure 5.6–10c
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Arsenic in
 Tissue Samples by River Mile, RM 0.8–12.2

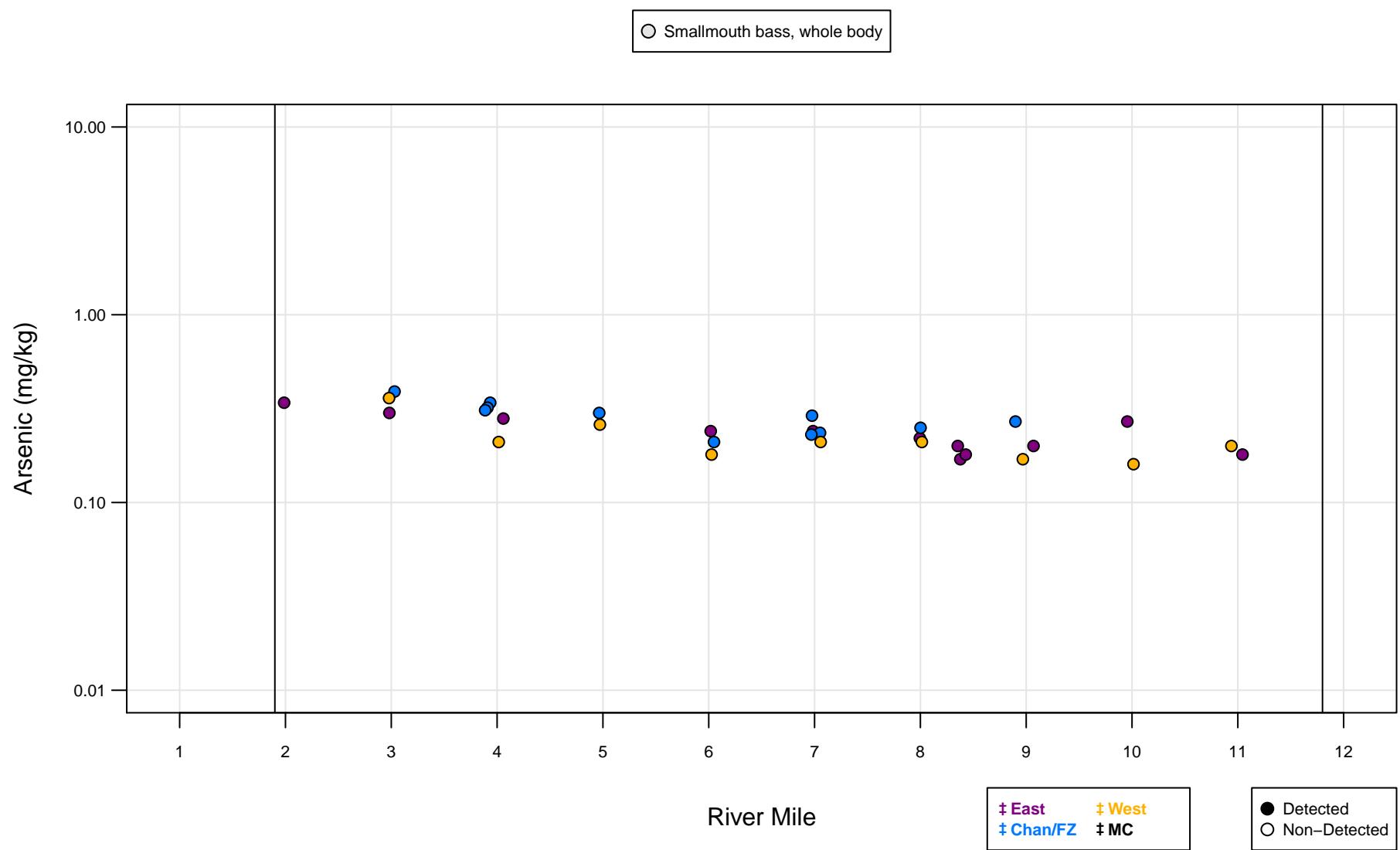


Figure 5.6–10d

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Arsenic in
Tissue Samples by River Mile, RM 0.8–12.2

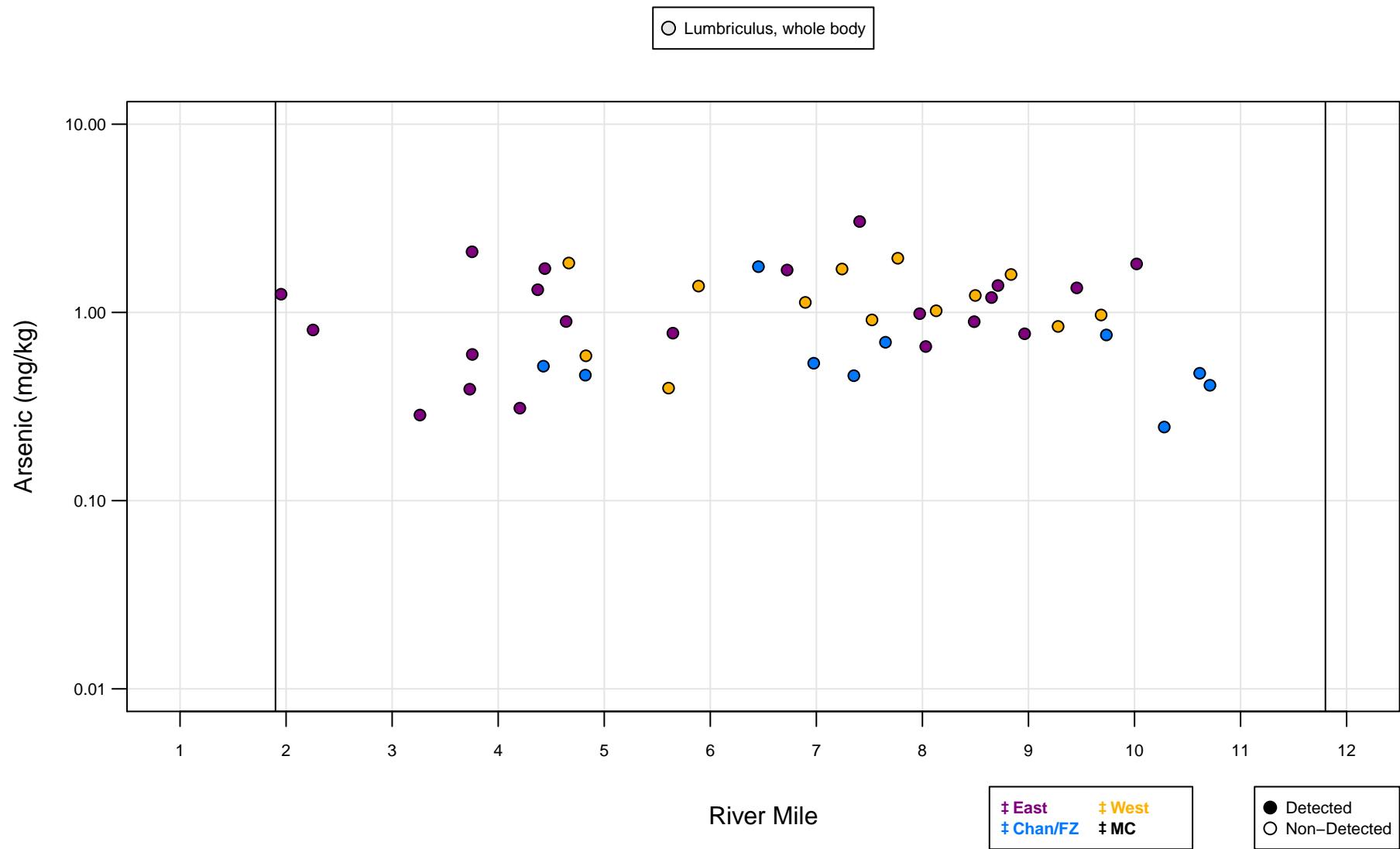


Figure 5.6–10e
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Arsenic in
 Tissue Samples by River Mile, RM 0.8–12.2

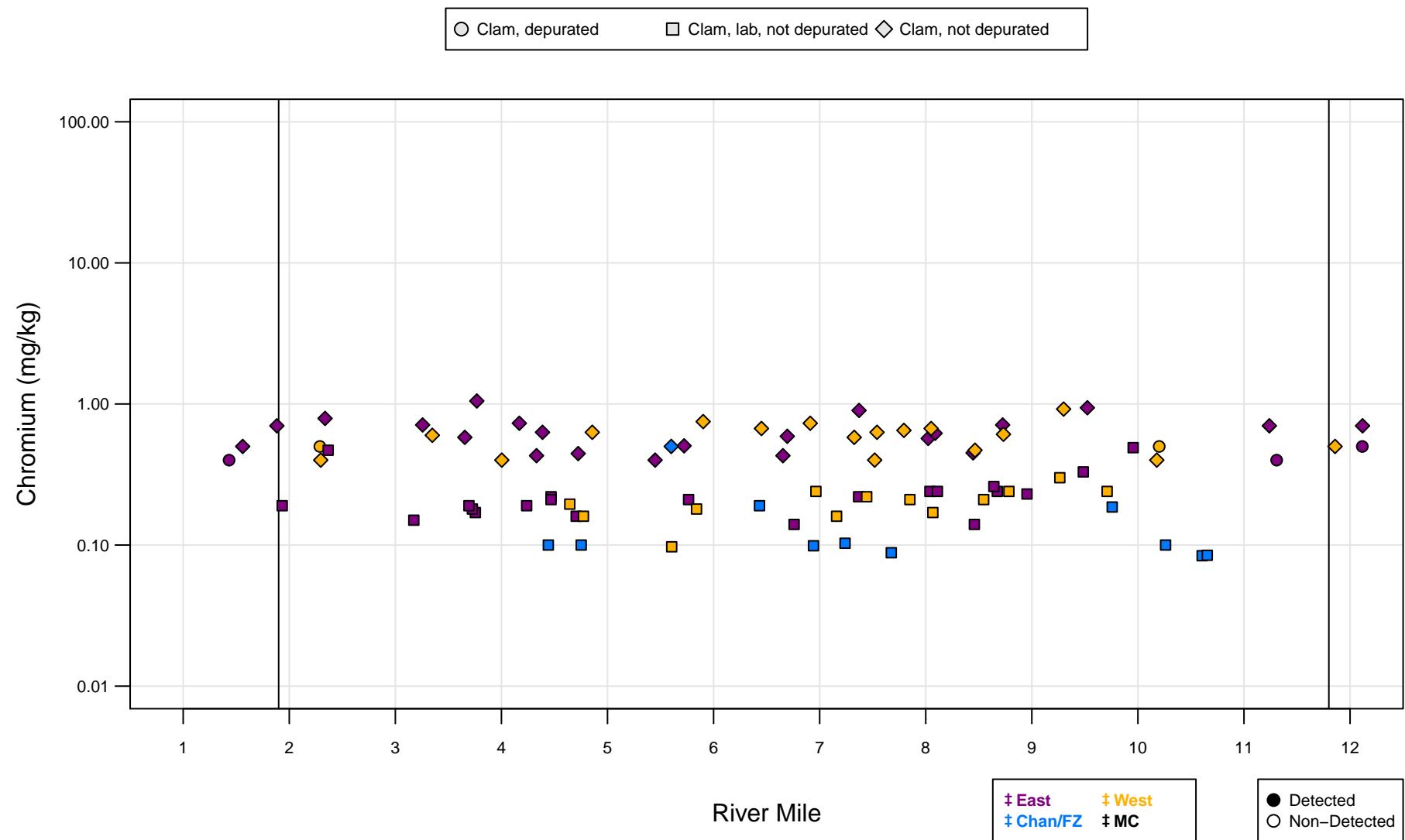


Figure 5.6–11a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Chromium in
 Tissue Samples by River Mile, RM 0.8–12.2

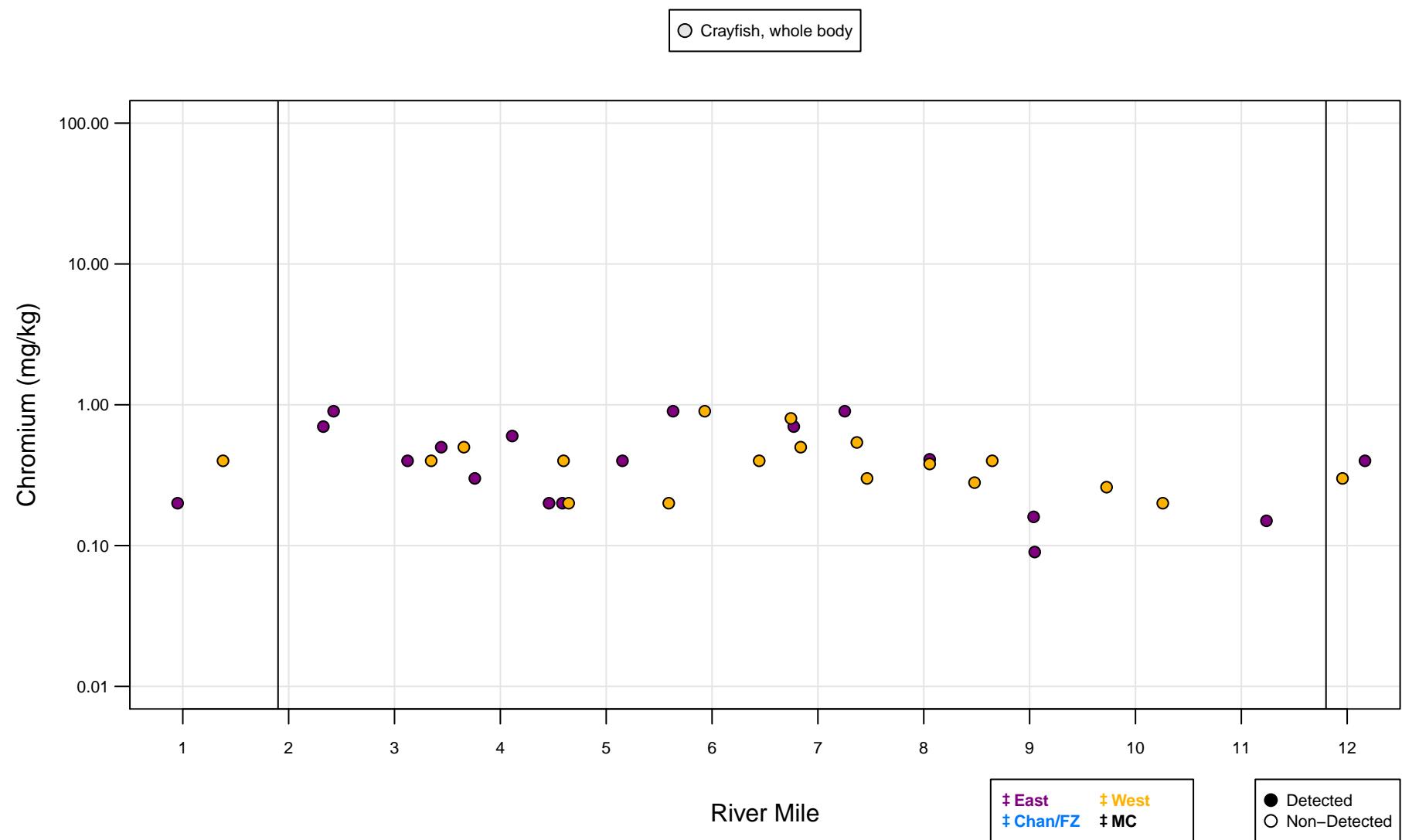


Figure 5.6-11b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Chromium in
Tissue Samples by River Mile, RM 0.8–12.2

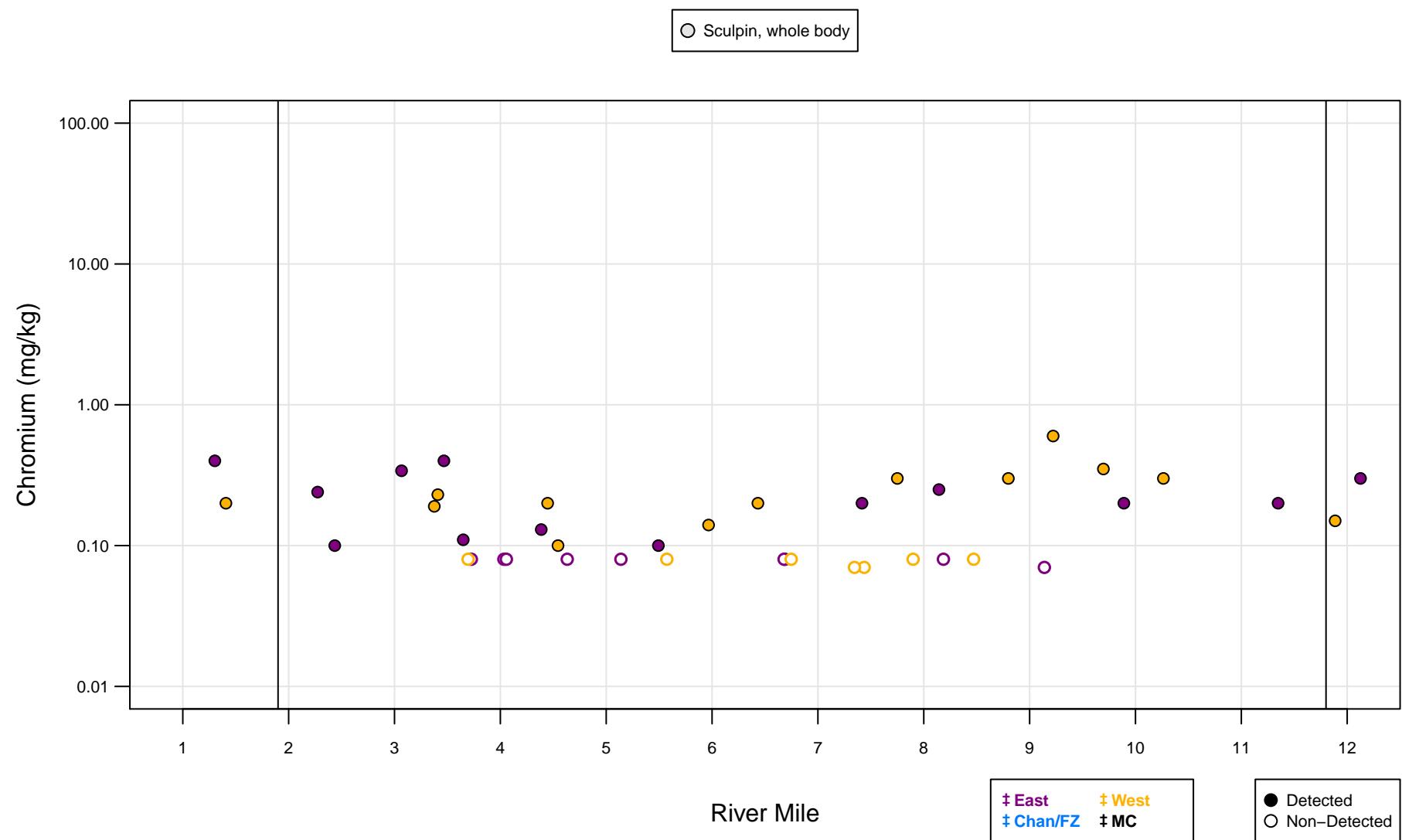


Figure 5.6-11c
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Chromium in
Tissue Samples by River Mile, RM 0.8–12.2

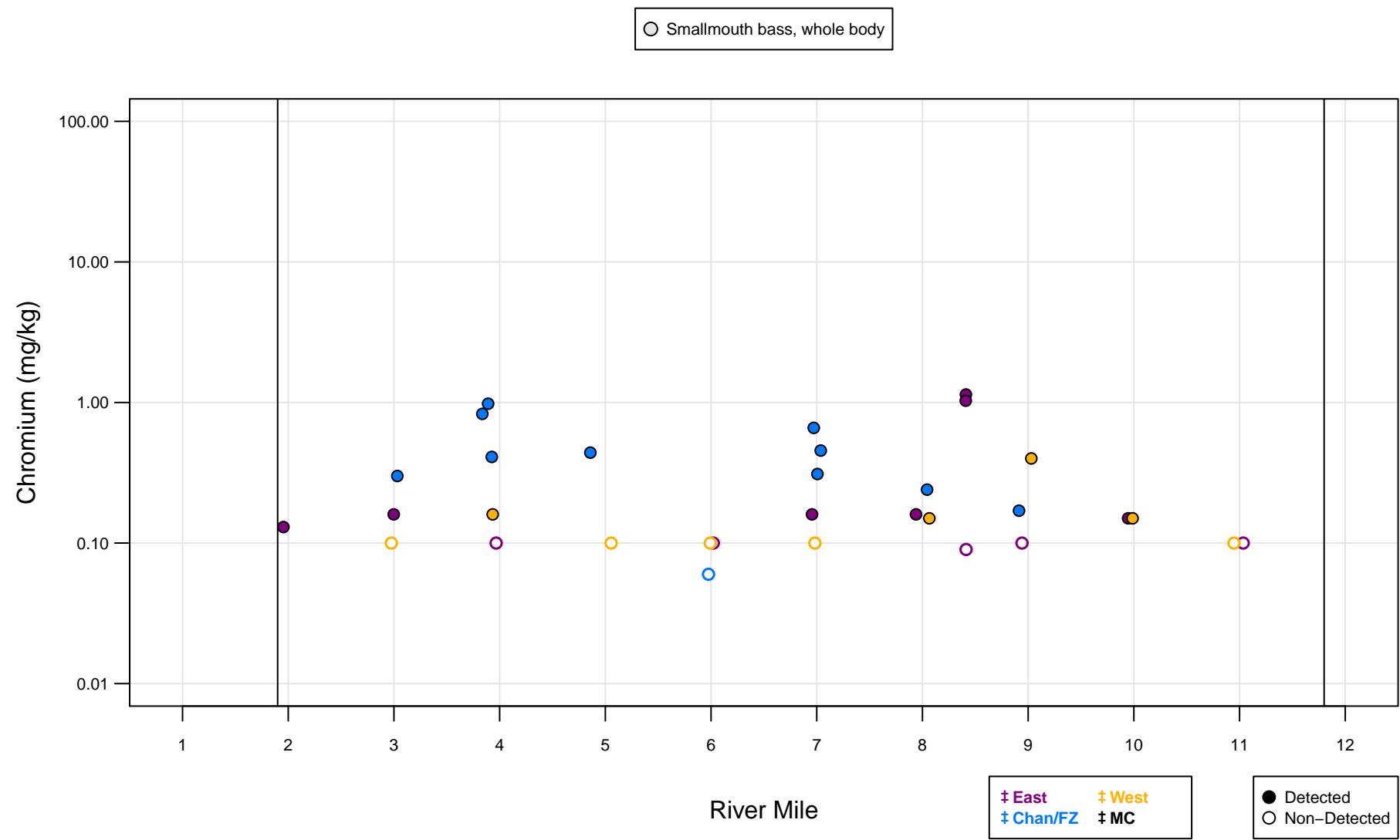


Figure 5.6–11d
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Chromium in
 Tissue Samples by River Mile, RM 0.8–12.2

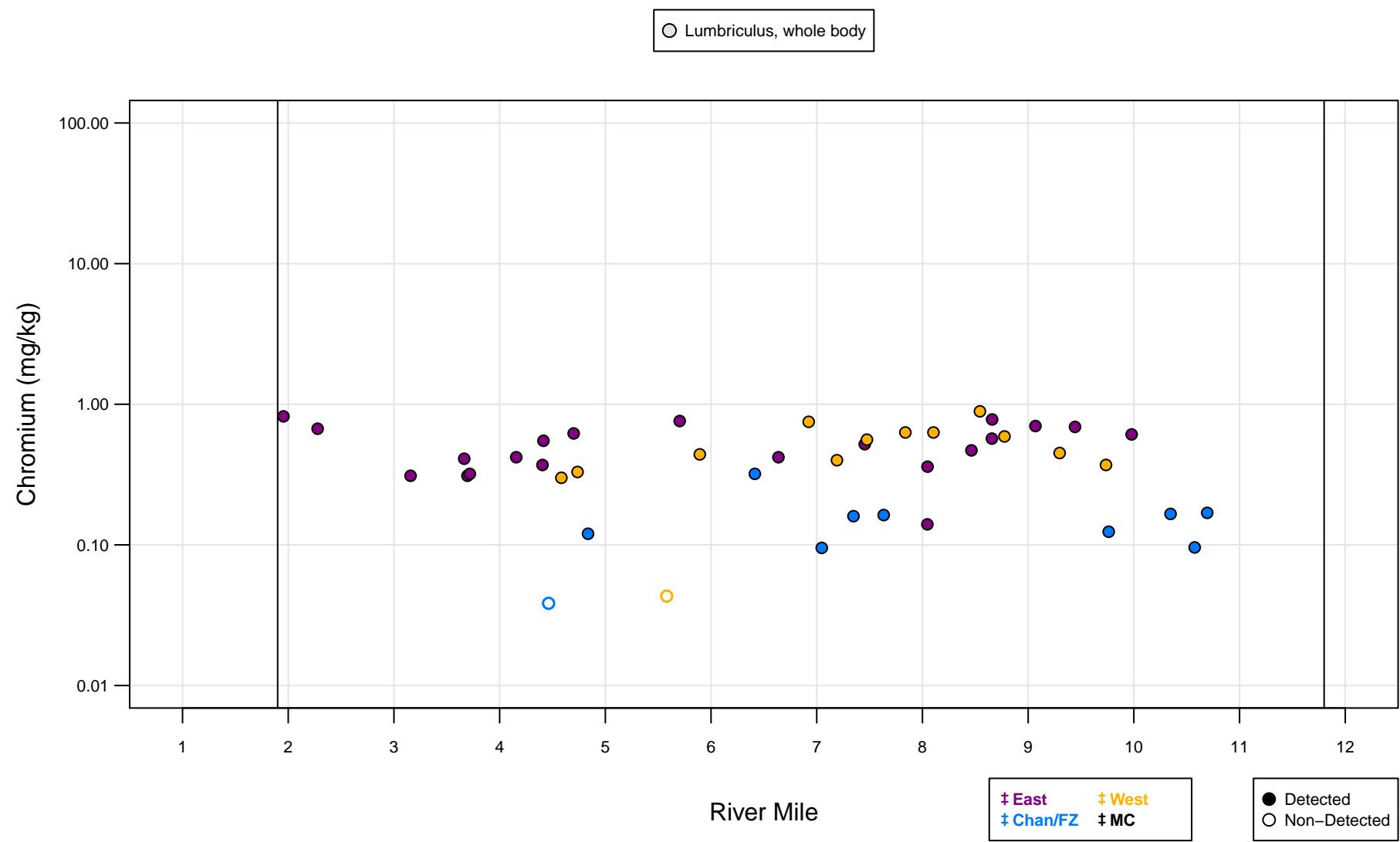


Figure 5.6-11e

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Chromium in
Tissue Samples by River Mile, RM 0.8–12.2

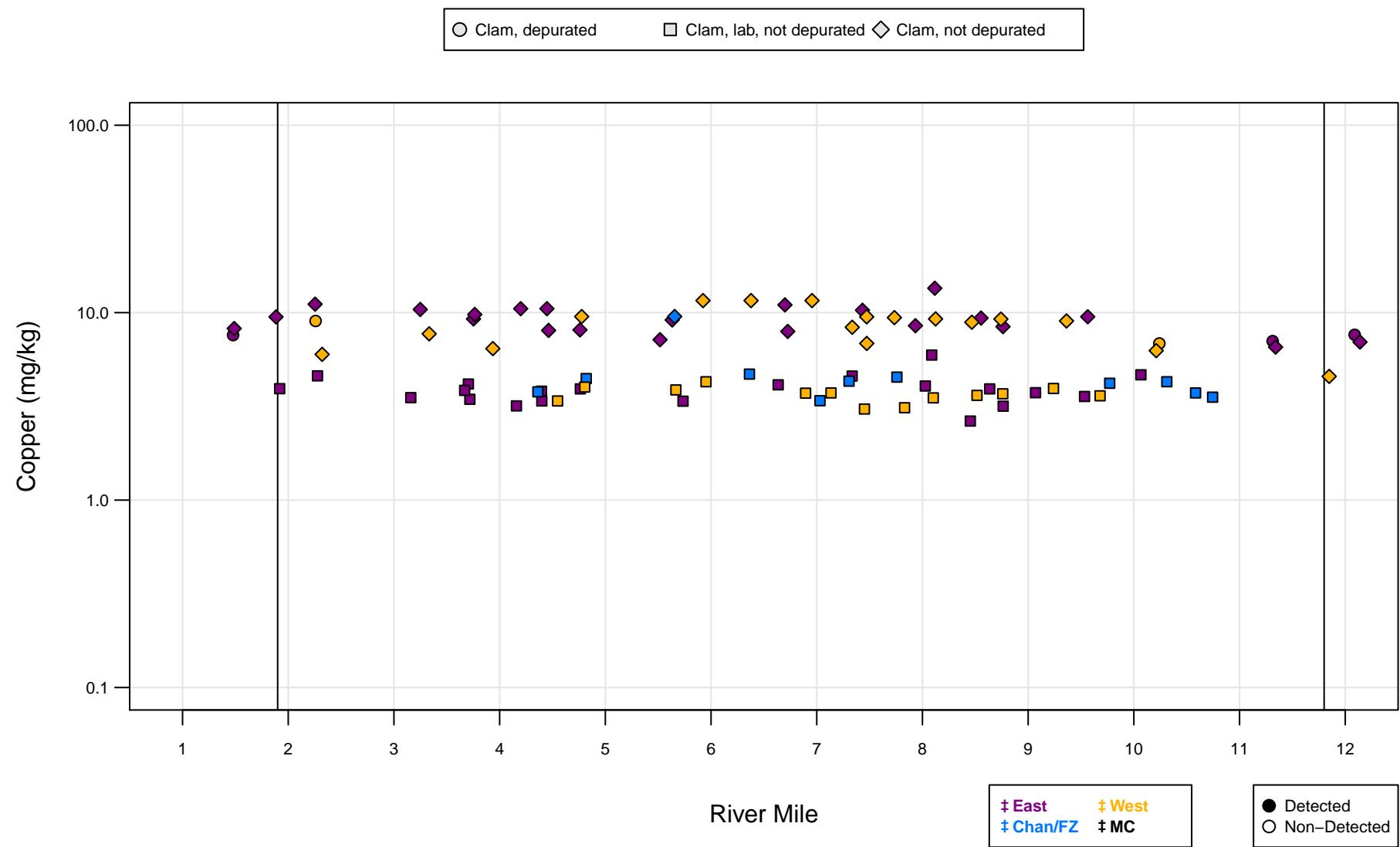


Figure 5.6-12a
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Copper in
Tissue Samples by River Mile, RM 0.8–12.2

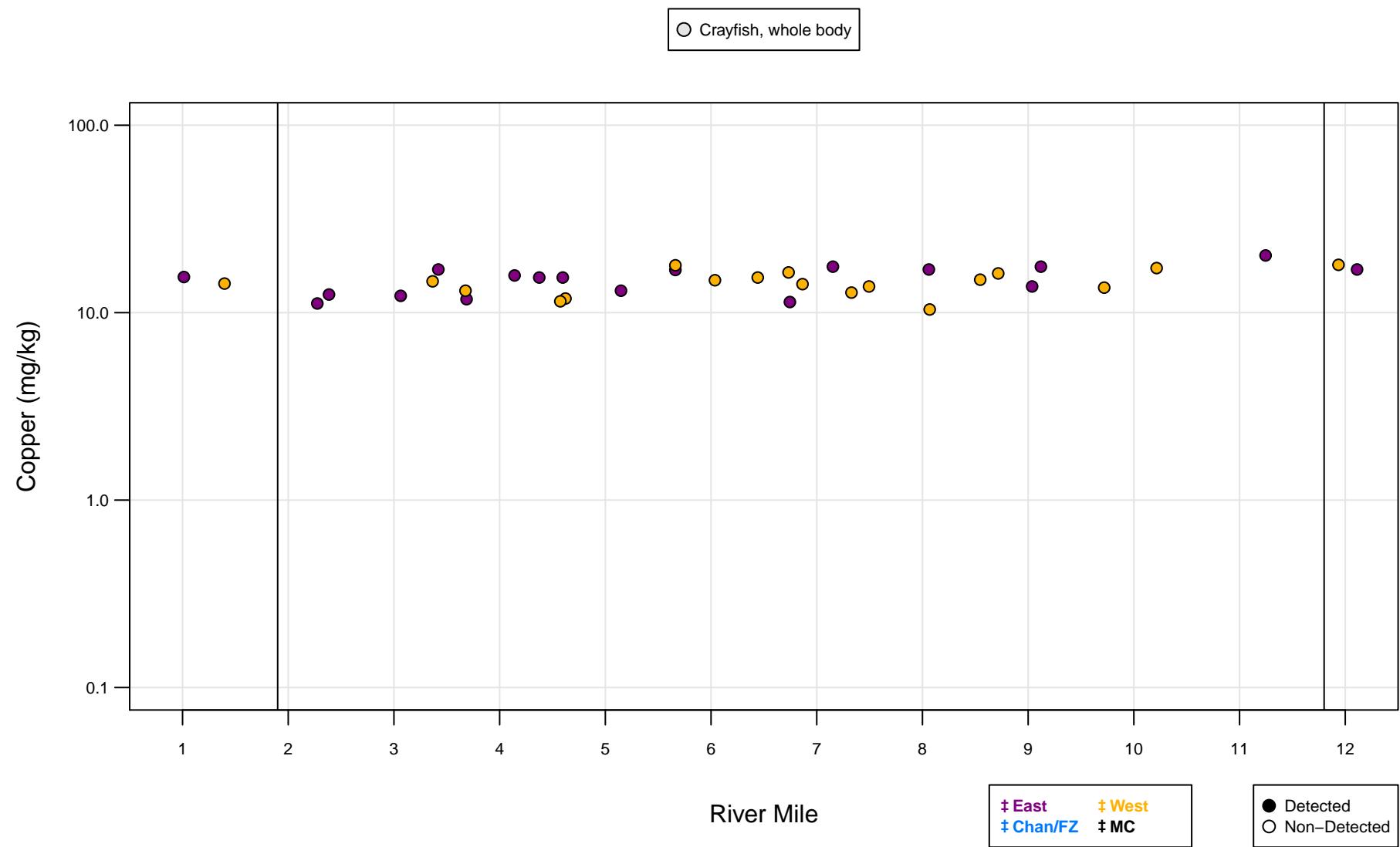


Figure 5.6–12b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Copper in
Tissue Samples by River Mile, RM 0.8–12.2

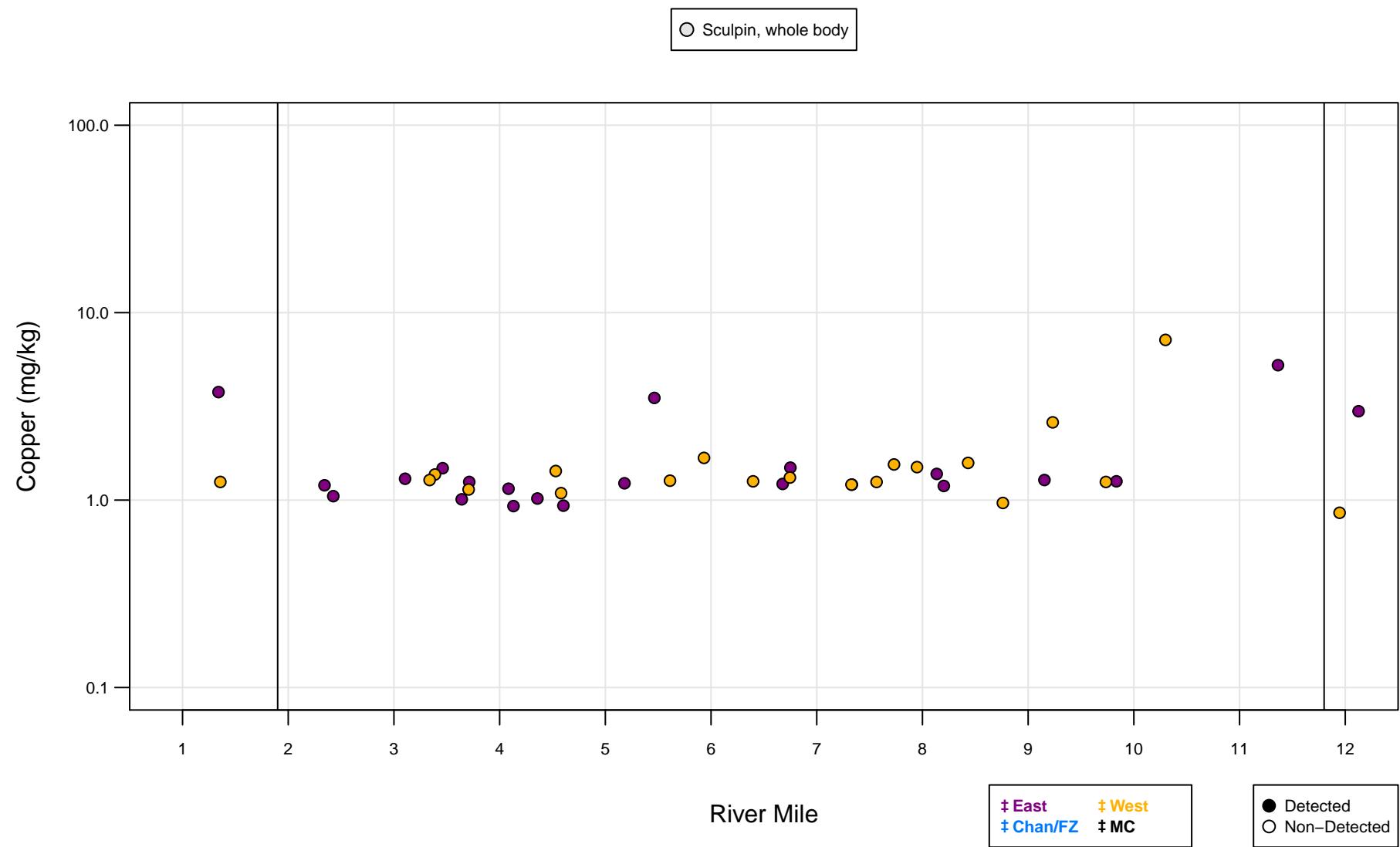


Figure 5.6–12c

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Copper in
Tissue Samples by River Mile, RM 0.8–12.2

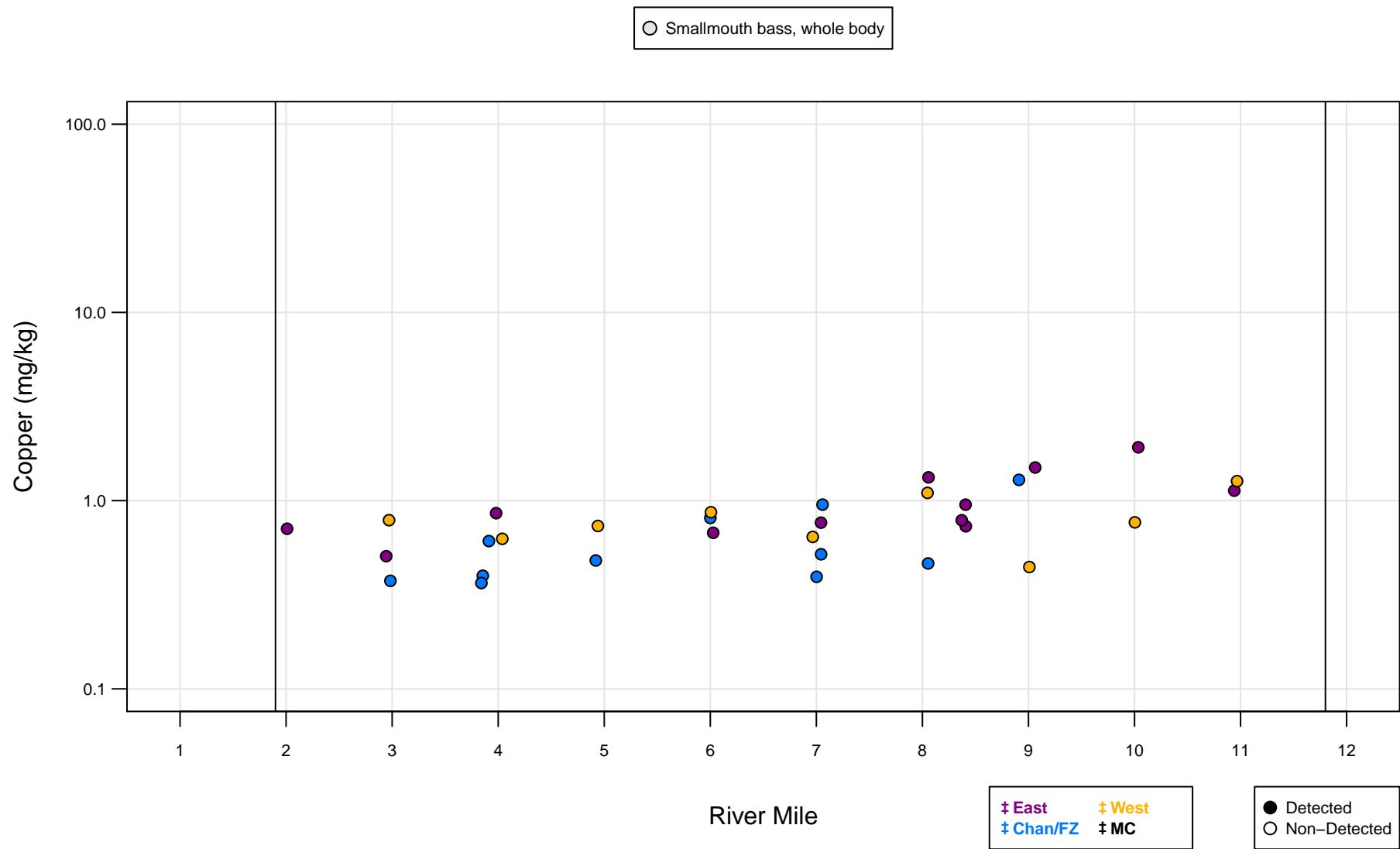


Figure 5.6–12d
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Copper in
 Tissue Samples by River Mile, RM 0.8–12.2

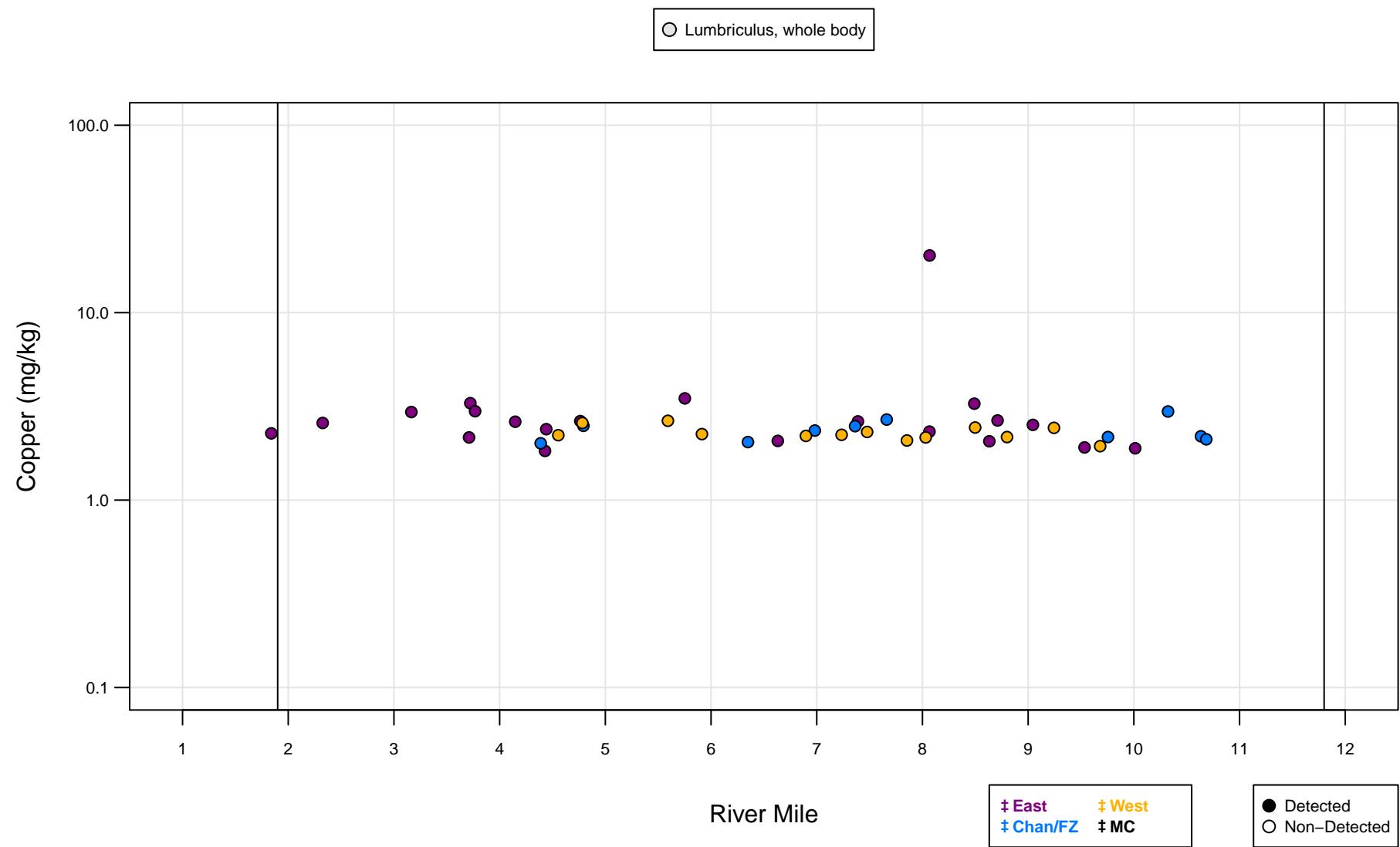


Figure 5.6-12e
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Copper in
 Tissue Samples by River Mile, RM 0.8–12.2

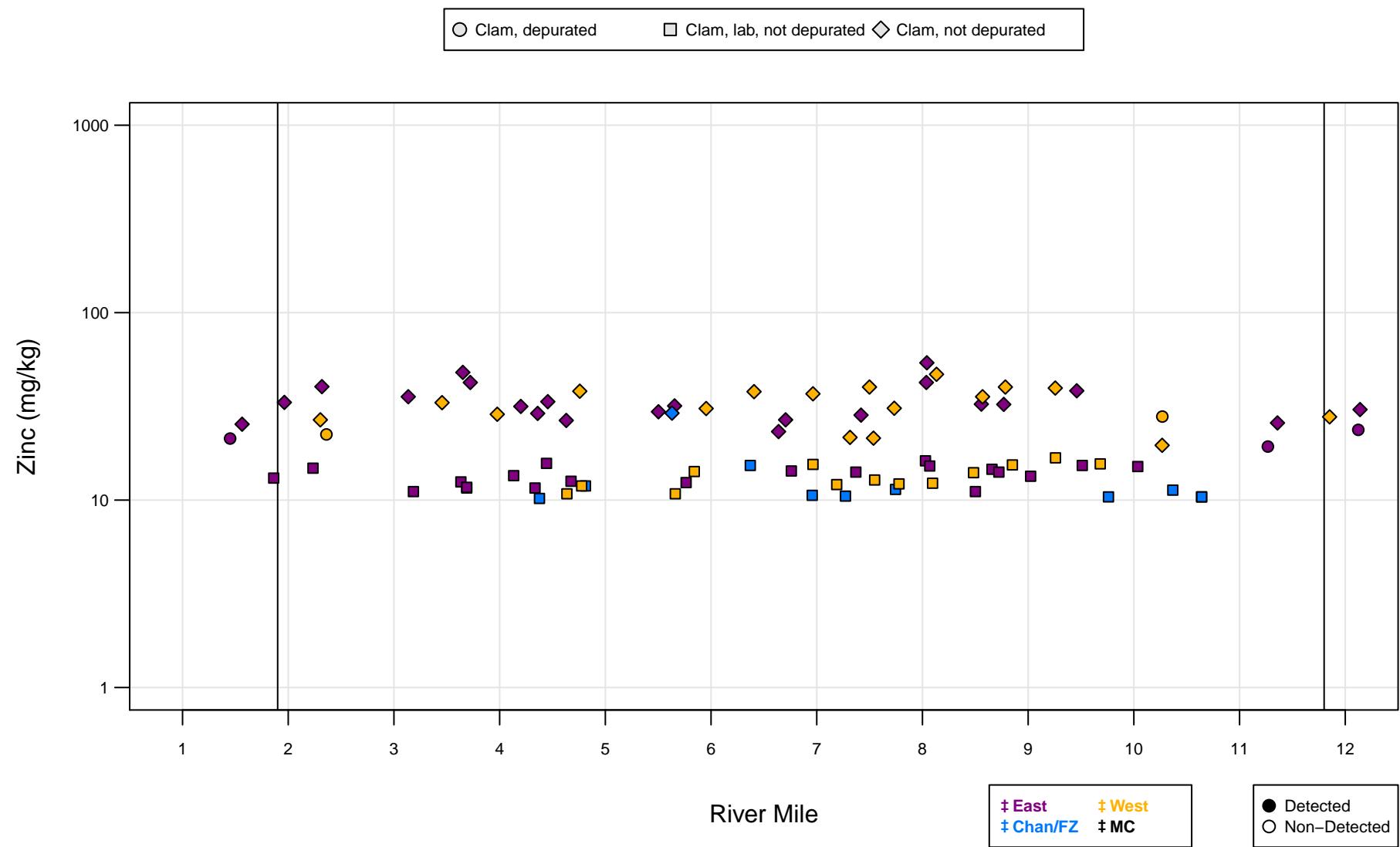


Figure 5.6–13a
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Zinc in
 Tissue Samples by River Mile, RM 0.8–12.2

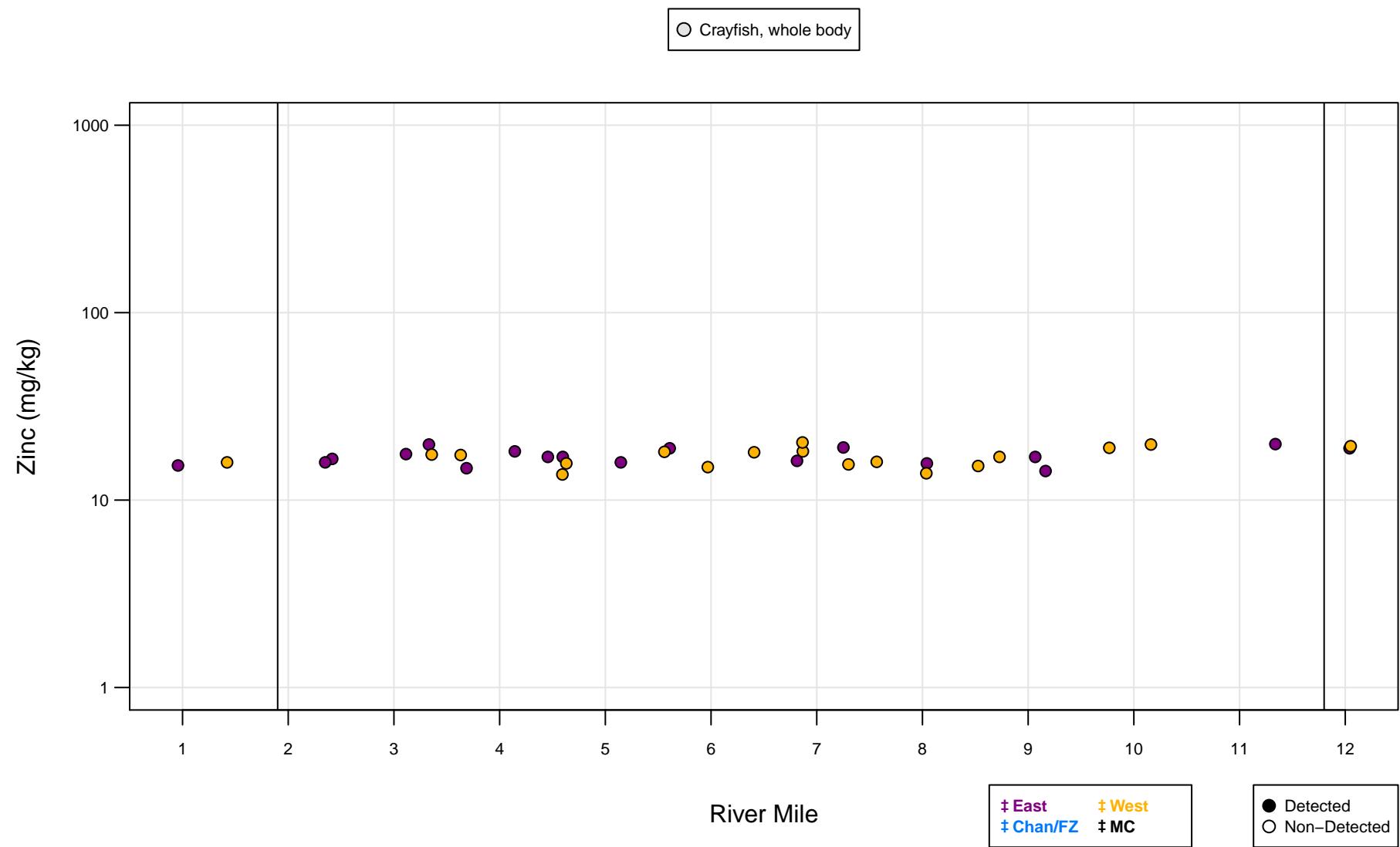


Figure 5.6–13b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Zinc in
Tissue Samples by River Mile, RM 0.8–12.2

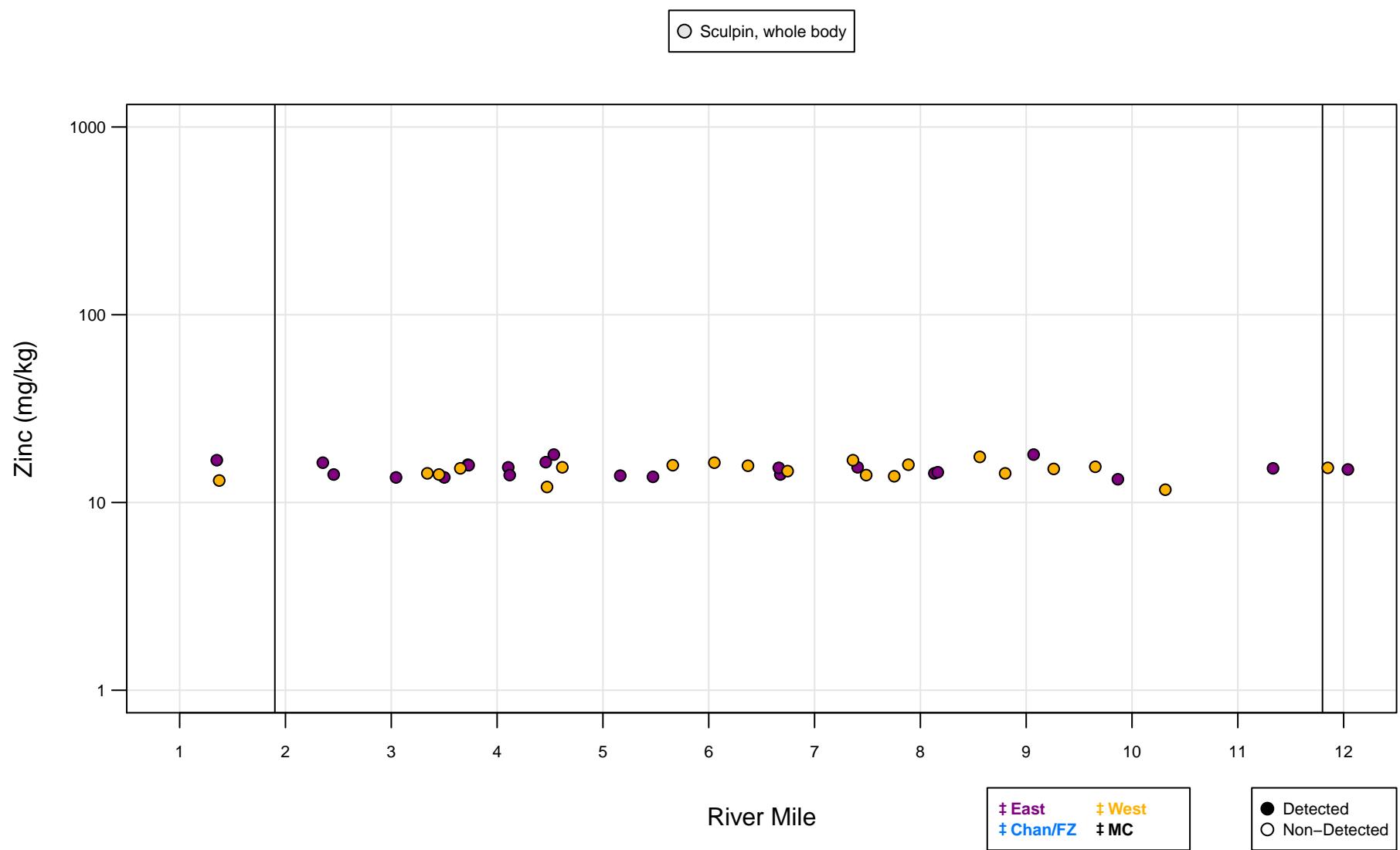


Figure 5.6–13c
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Zinc in
 Tissue Samples by River Mile, RM 0.8–12.2

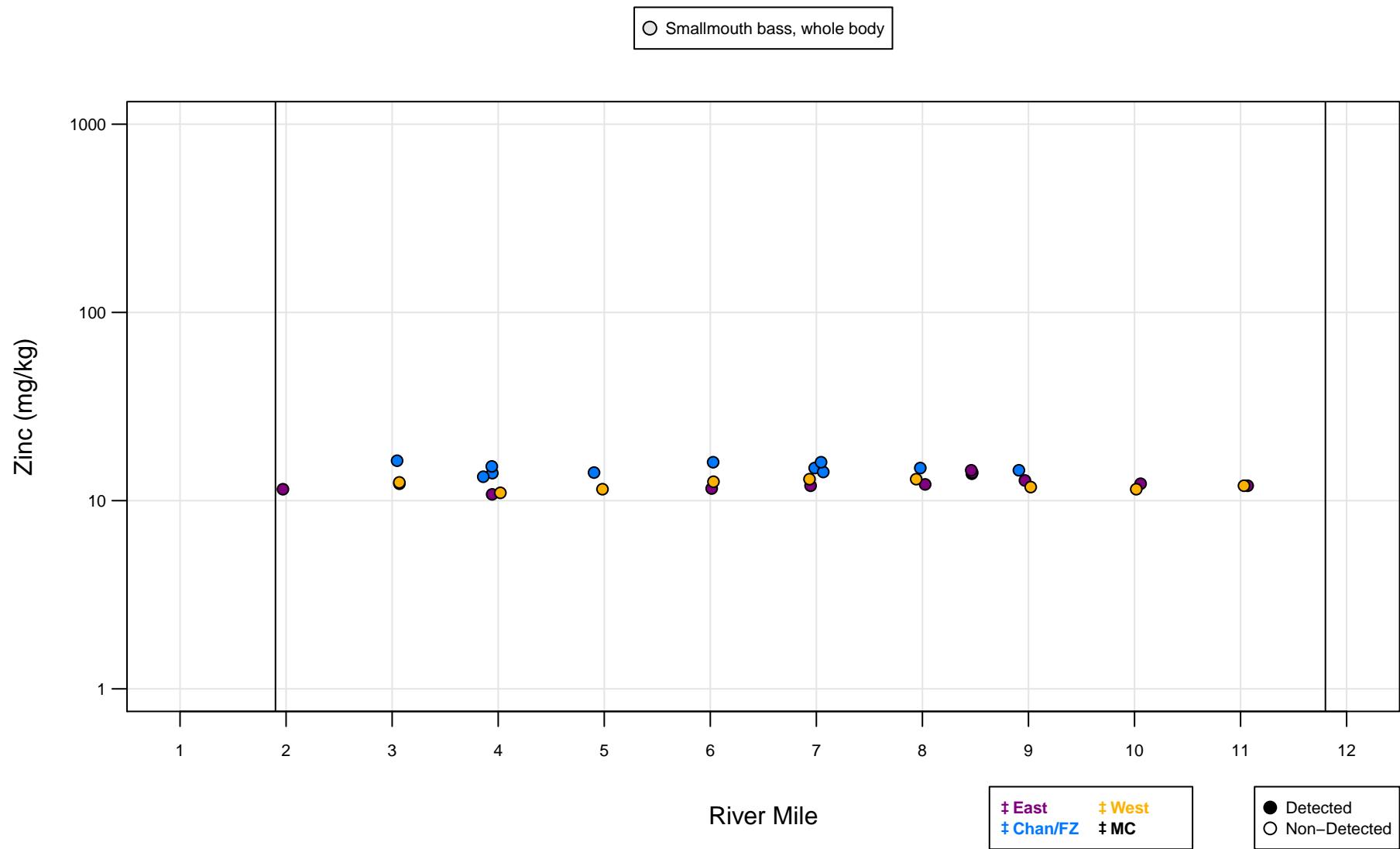


Figure 5.6–13d
 Portland Harbor RI/FS
 Remedial Investigation Report
 Scatter Plot of Zinc in
 Tissue Samples by River Mile, RM 0.8–12.2

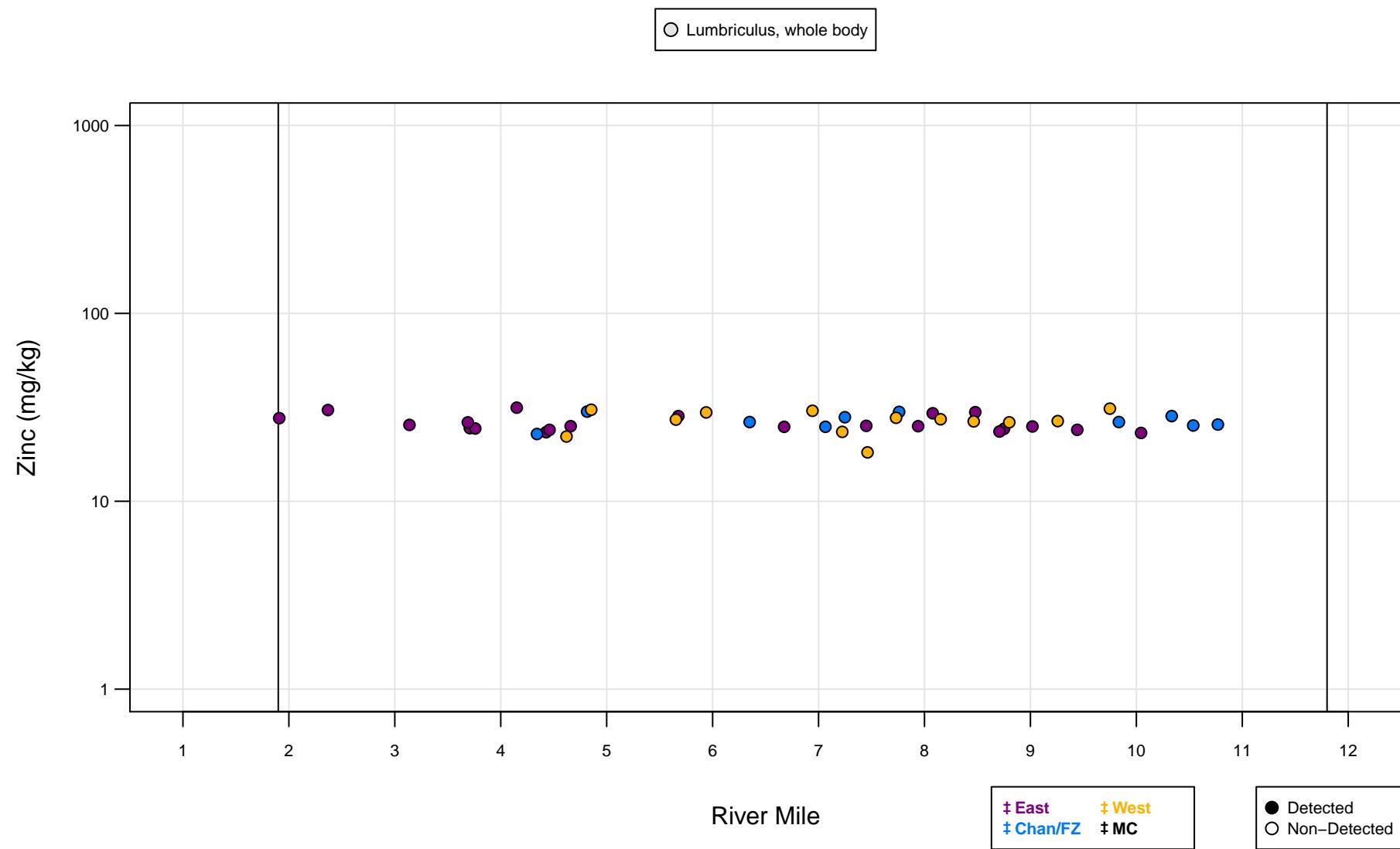


Figure 5.6–13e
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Zinc in
Tissue Samples by River Mile, RM 0.8–12.2

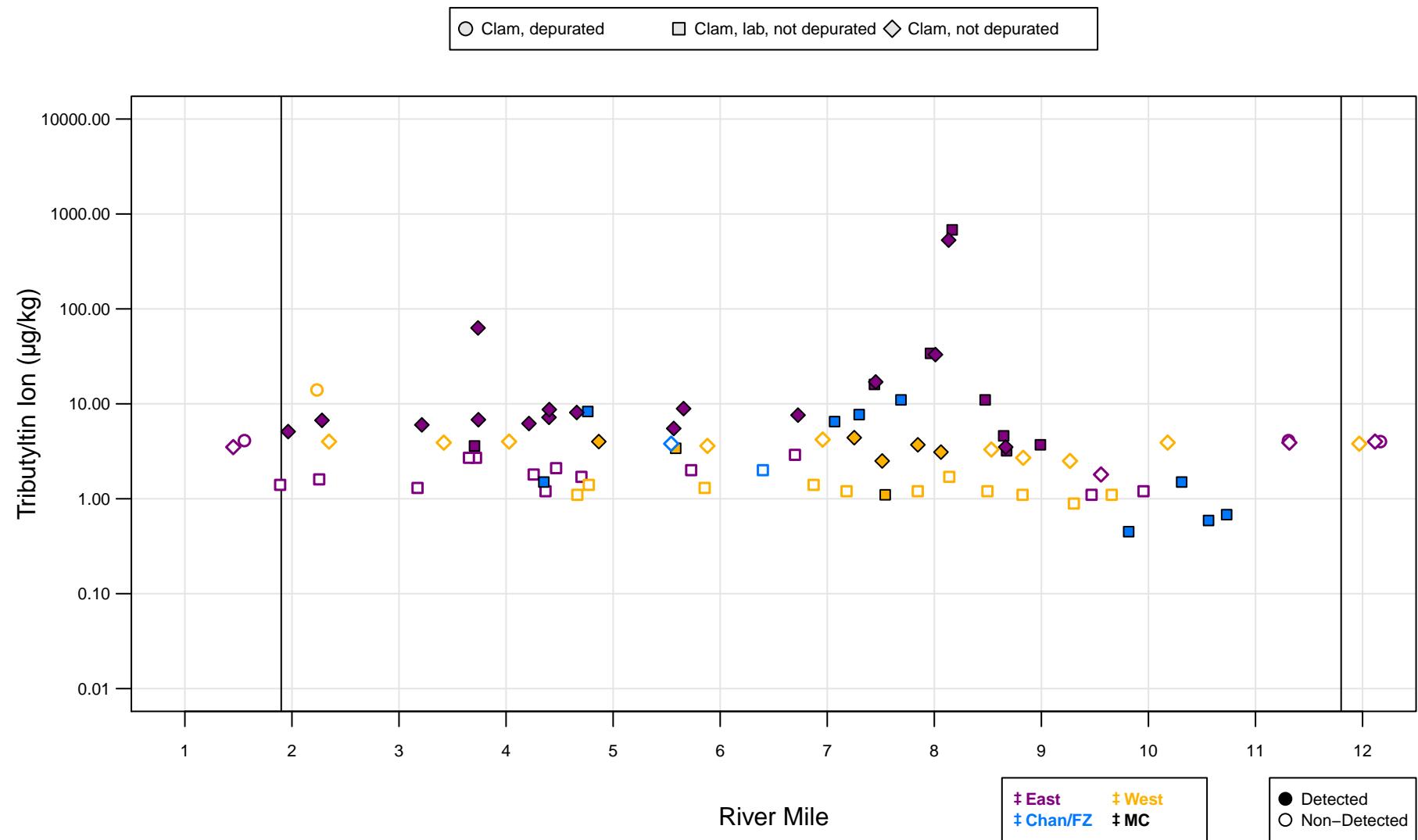


Figure 5.6-14a

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Tributyltin Ion in
Tissue Samples by River Mile, RM 0.8–12.2

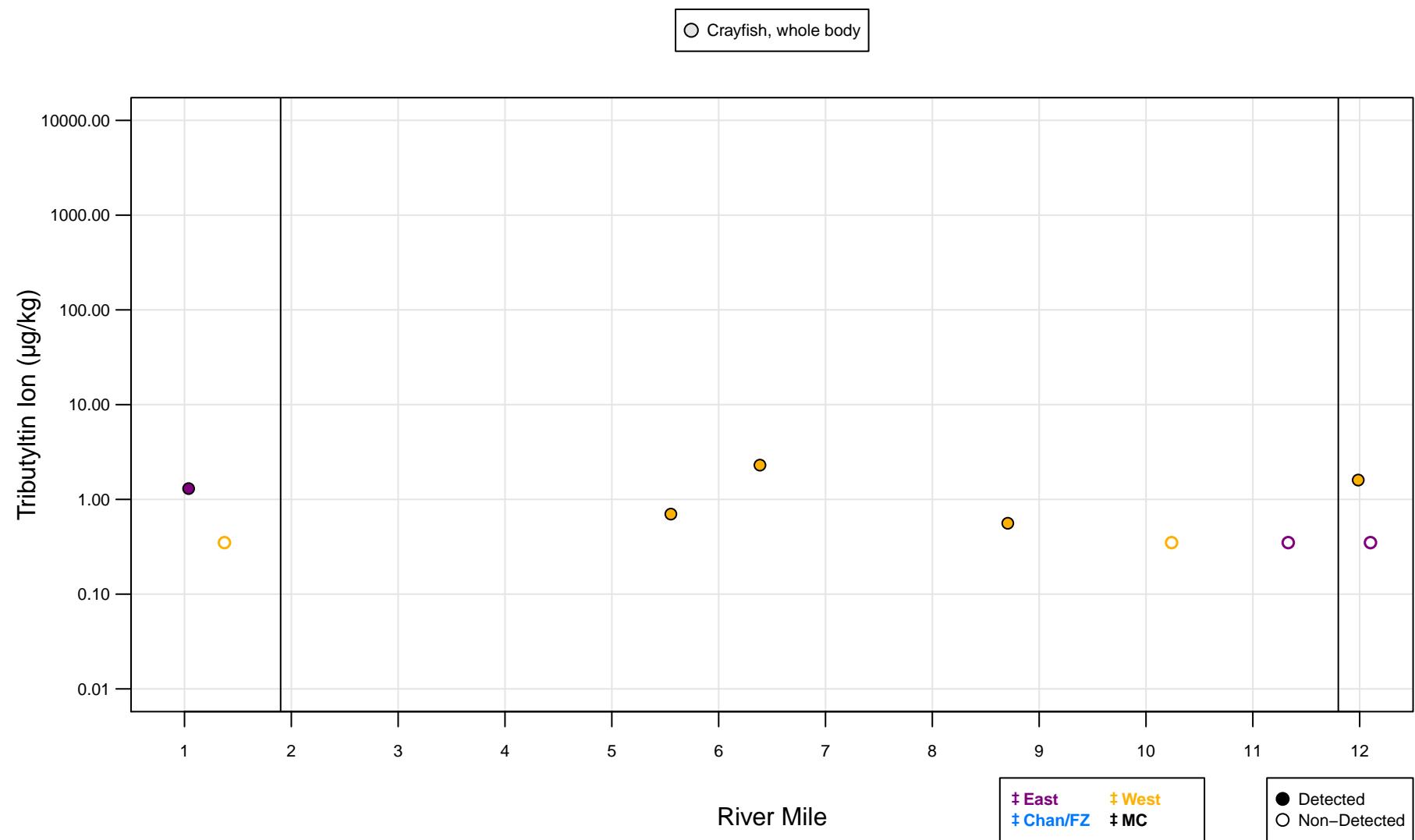


Figure 5.6–14b

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Tributyltin Ion in
Tissue Samples by River Mile, RM 0.8–12.2

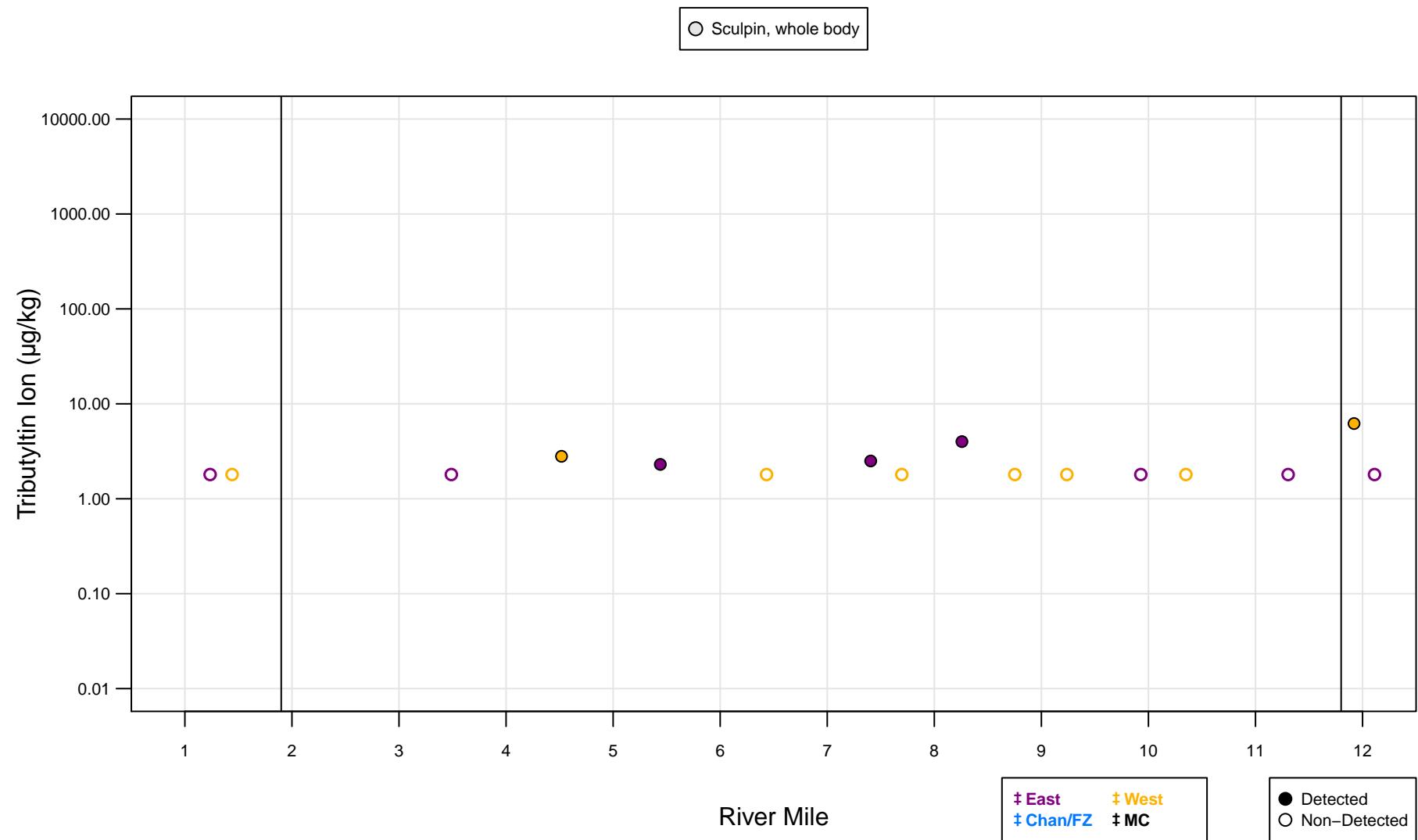


Figure 5.6-14c

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Tributyltin Ion in
Tissue Samples by River Mile, RM 0.8–12.2

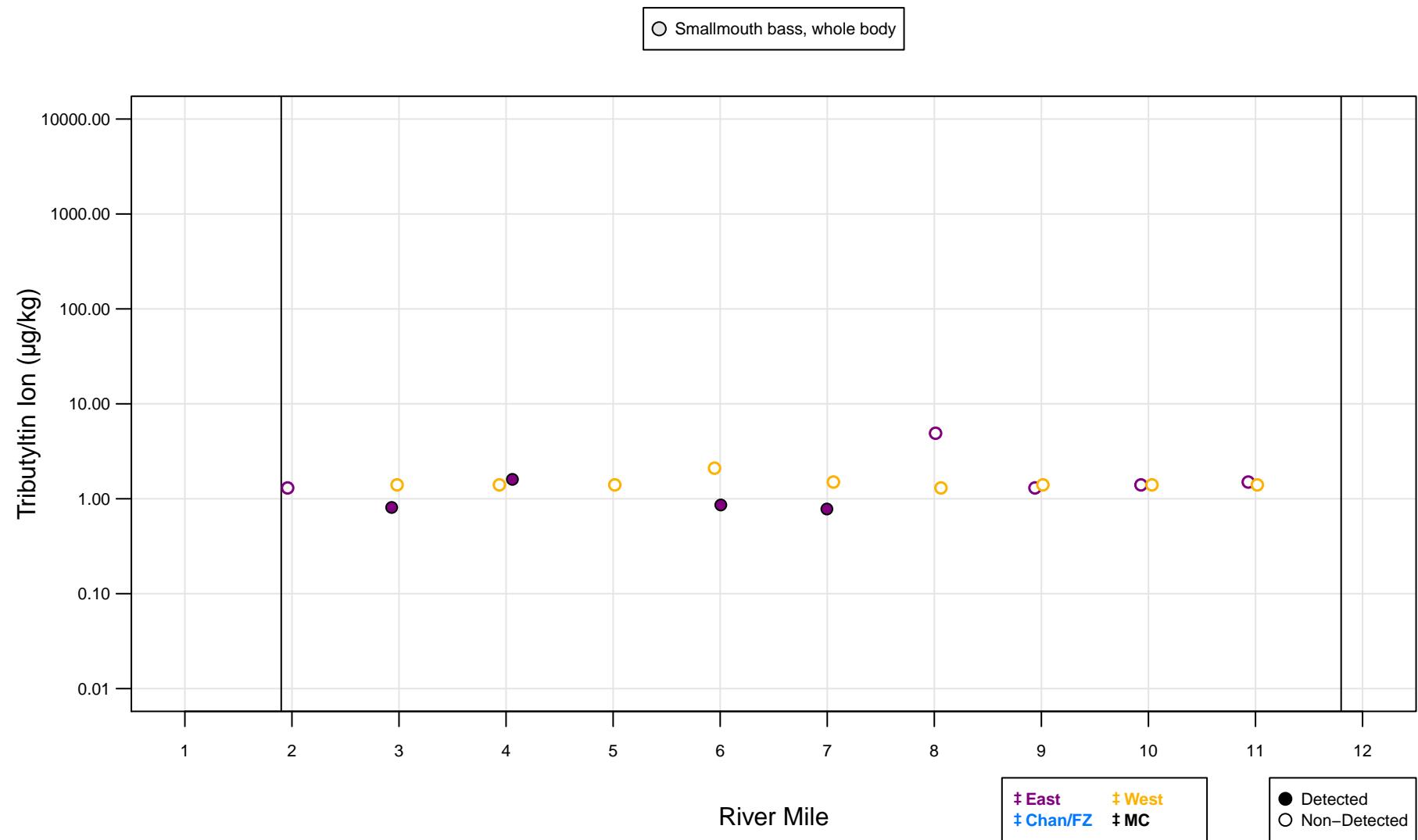


Figure 5.6–14d

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Tributyltin Ion in
Tissue Samples by River Mile, RM 0.8–12.2

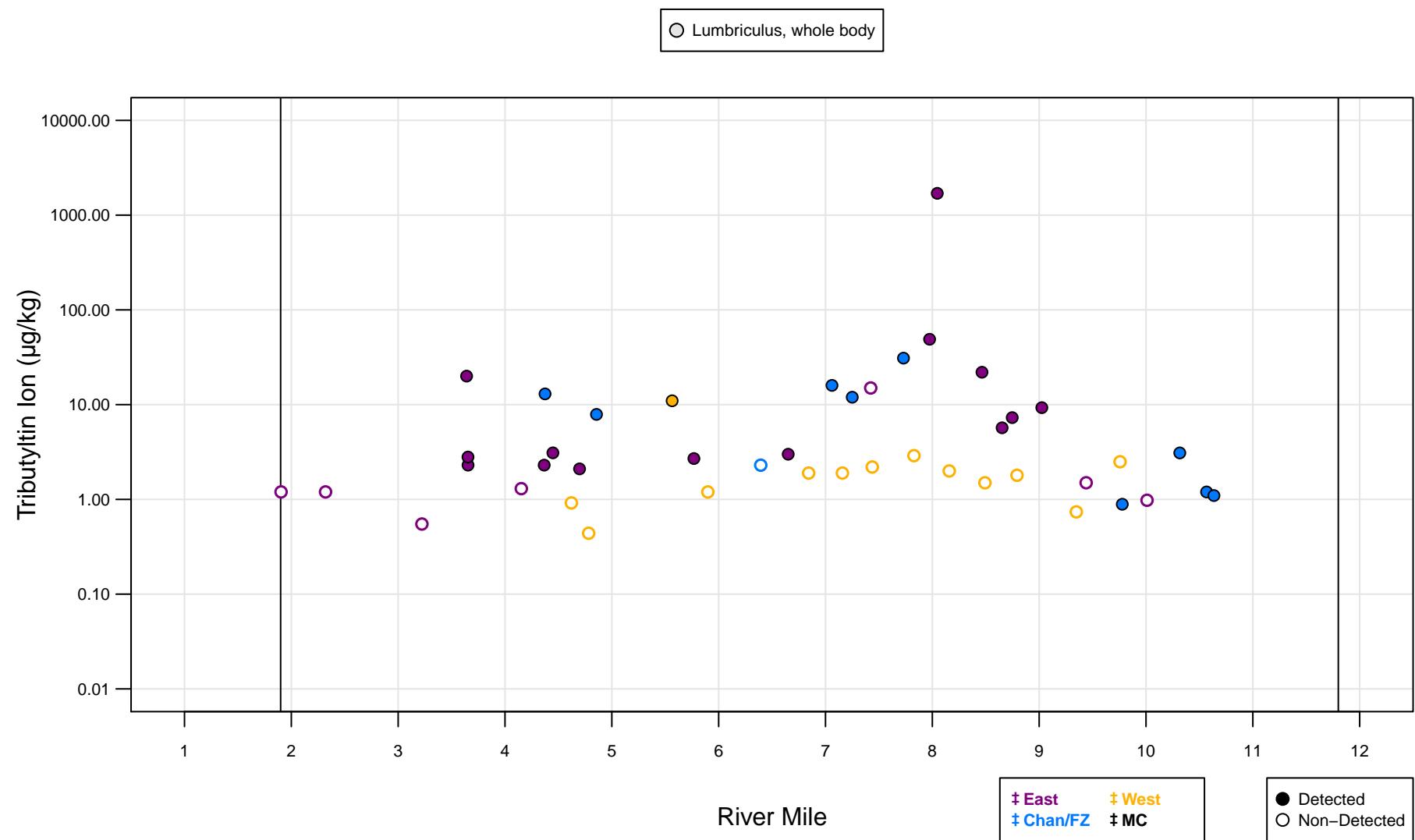


Figure 5.6-14e

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Tributyltin Ion in
Tissue Samples by River Mile, RM 0.8–12.2

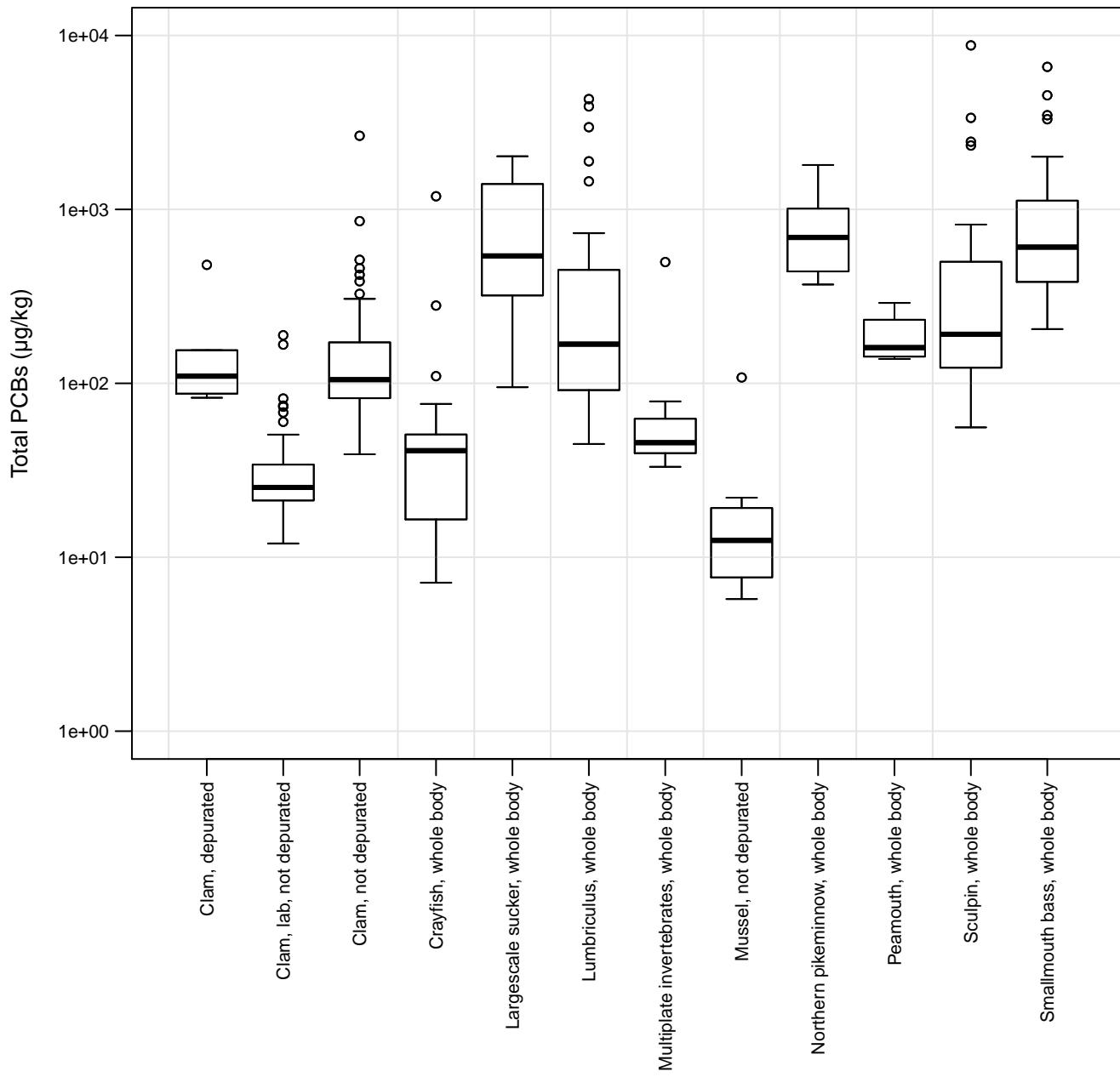


Figure 5.6–15
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected Total
 PCBs in Biota (RM 0.8–12.2)

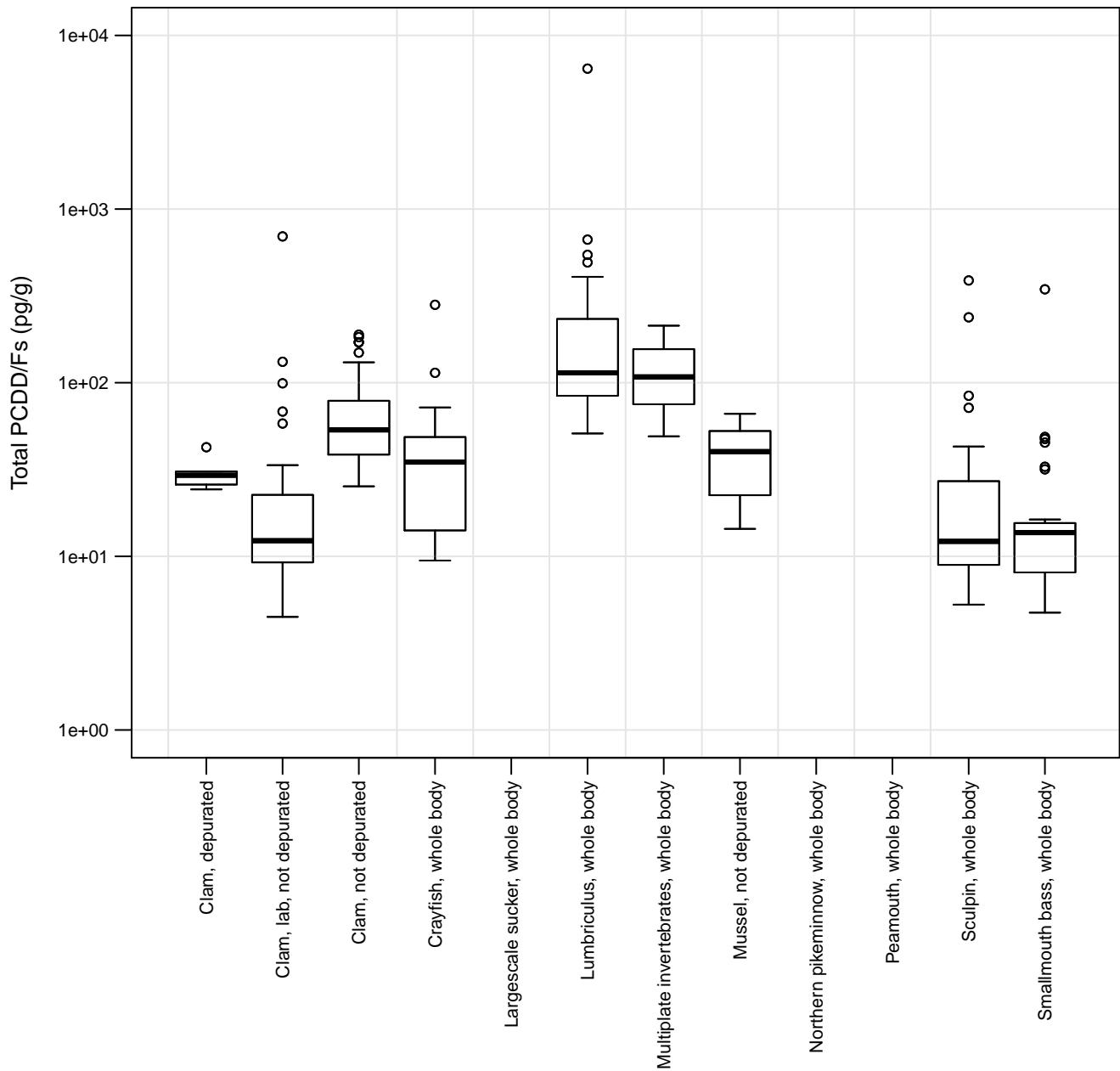


Figure 5.6–16
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 Total PCDD/Fs in Biota (RM 0.8–12.2)

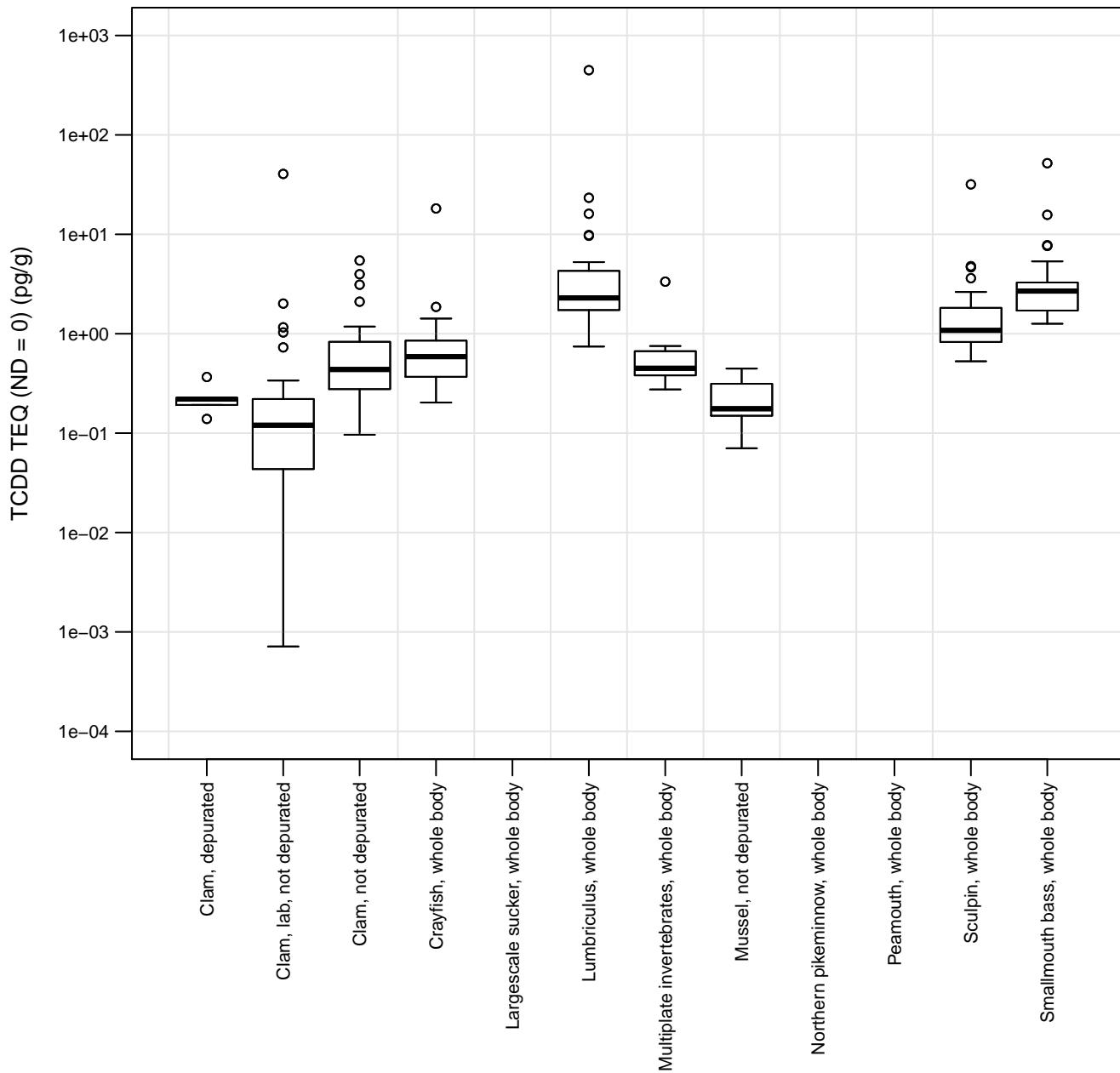


Figure 5.6-17
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 TCDD TEQ in Biota (RM 0.8–12.2)

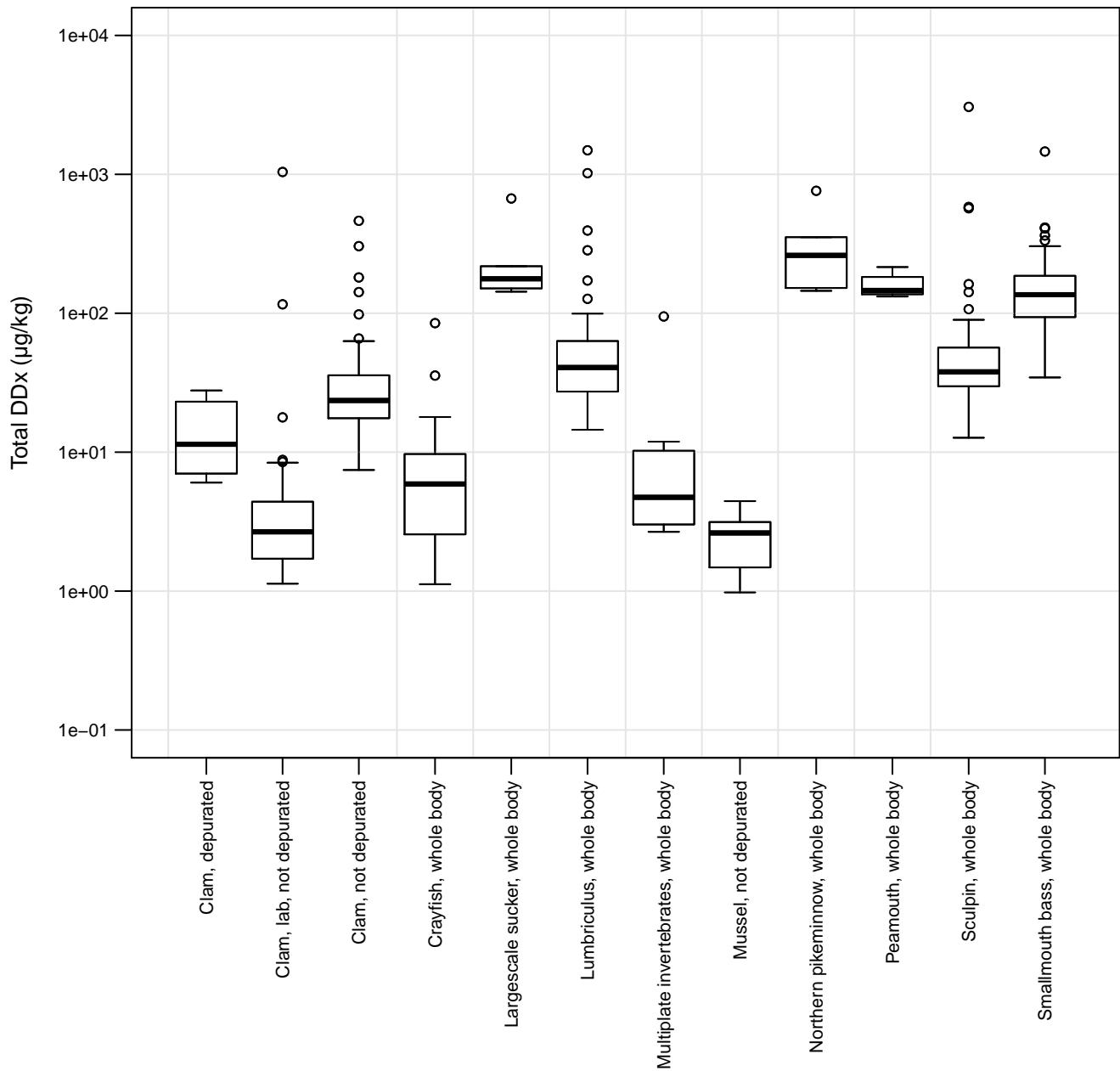


Figure 5.6–18
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 Total DDx in Biota (RM 0.8–12.2)

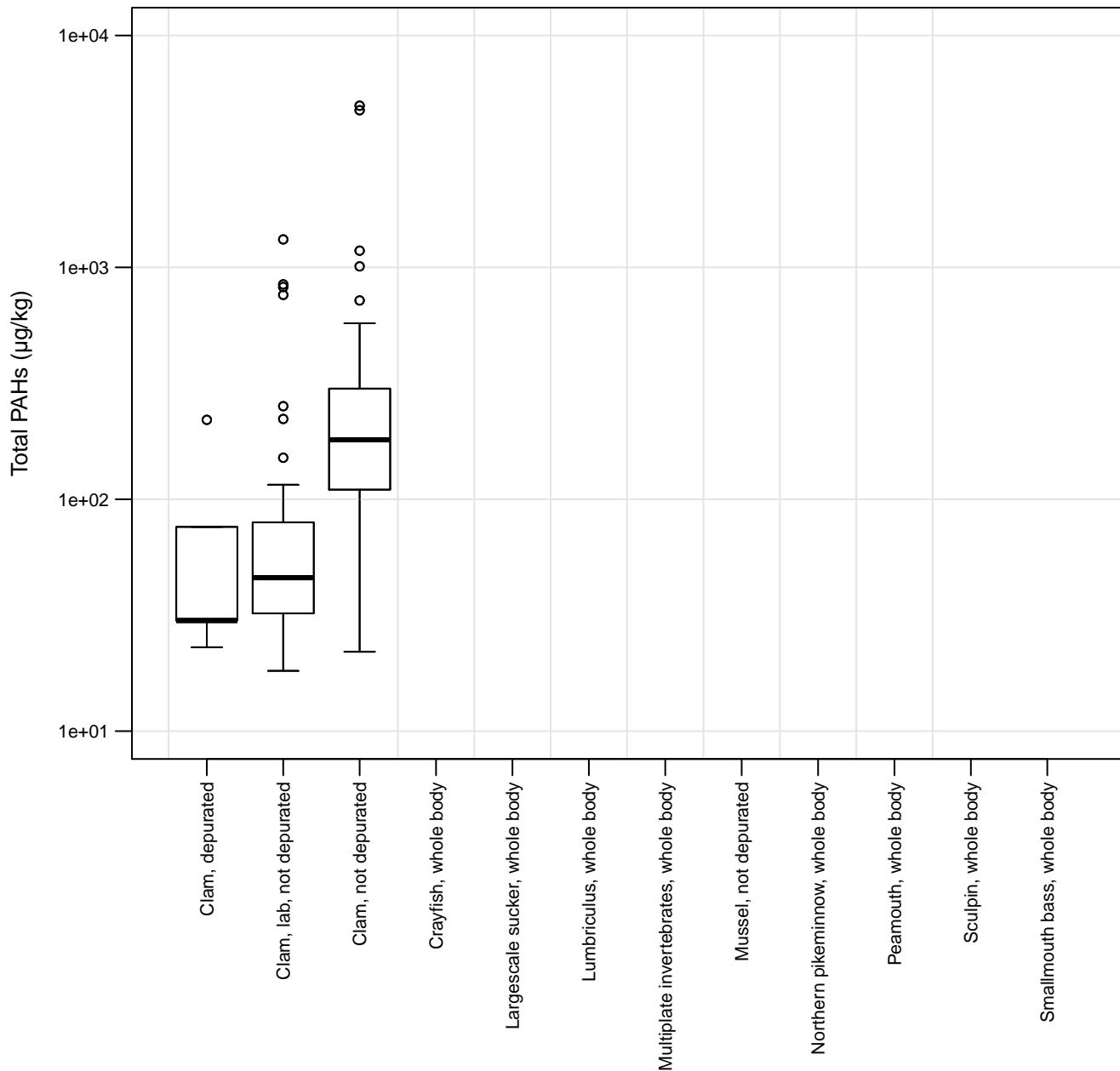


Figure 5.6–19
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Detected
Total PAHs in Biota (RM 0.8–12.2)

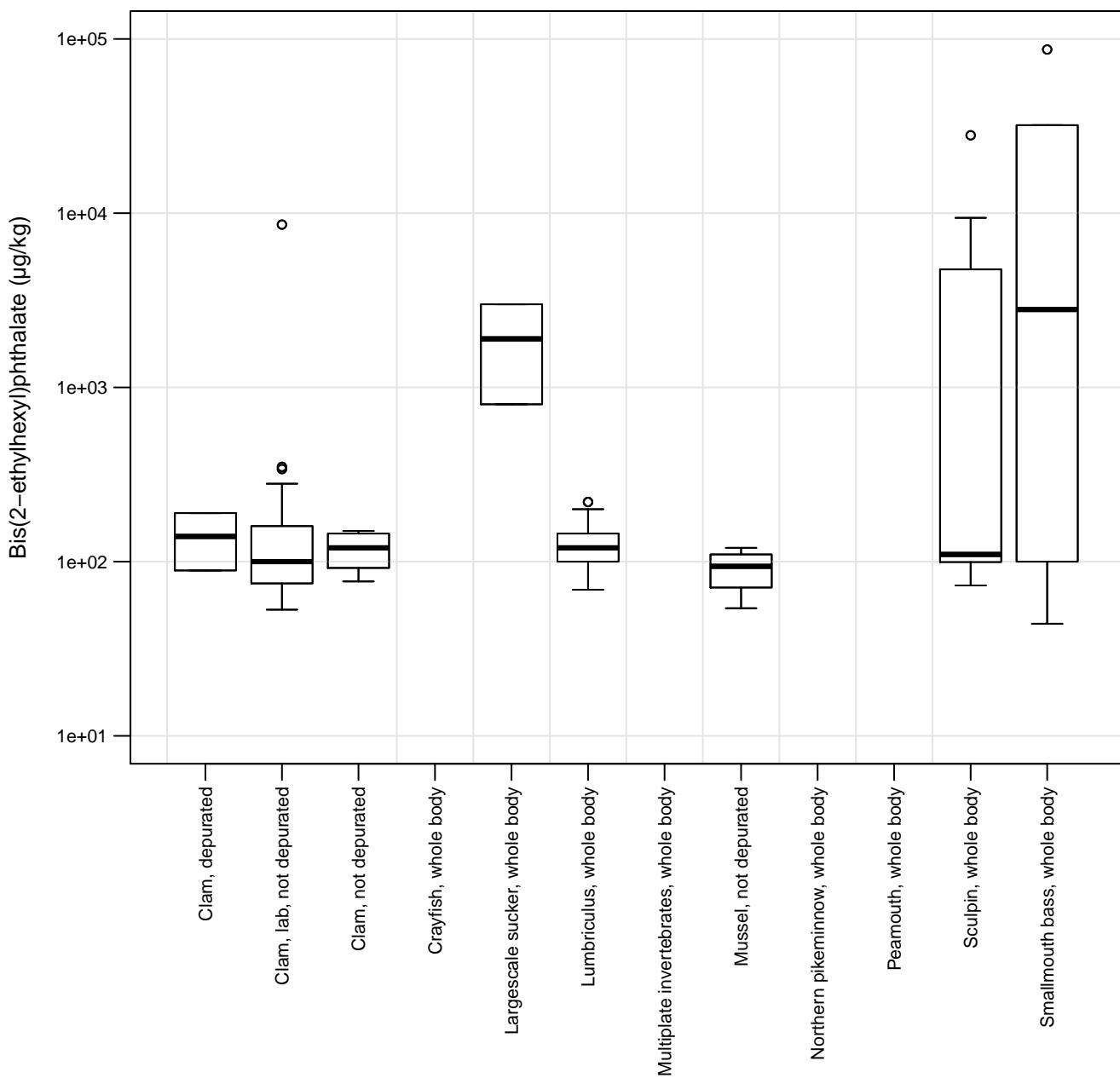


Figure 5.6–20
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 Bis(2-ethylhexyl)phthalate in Biota (RM 0.8–12.2)

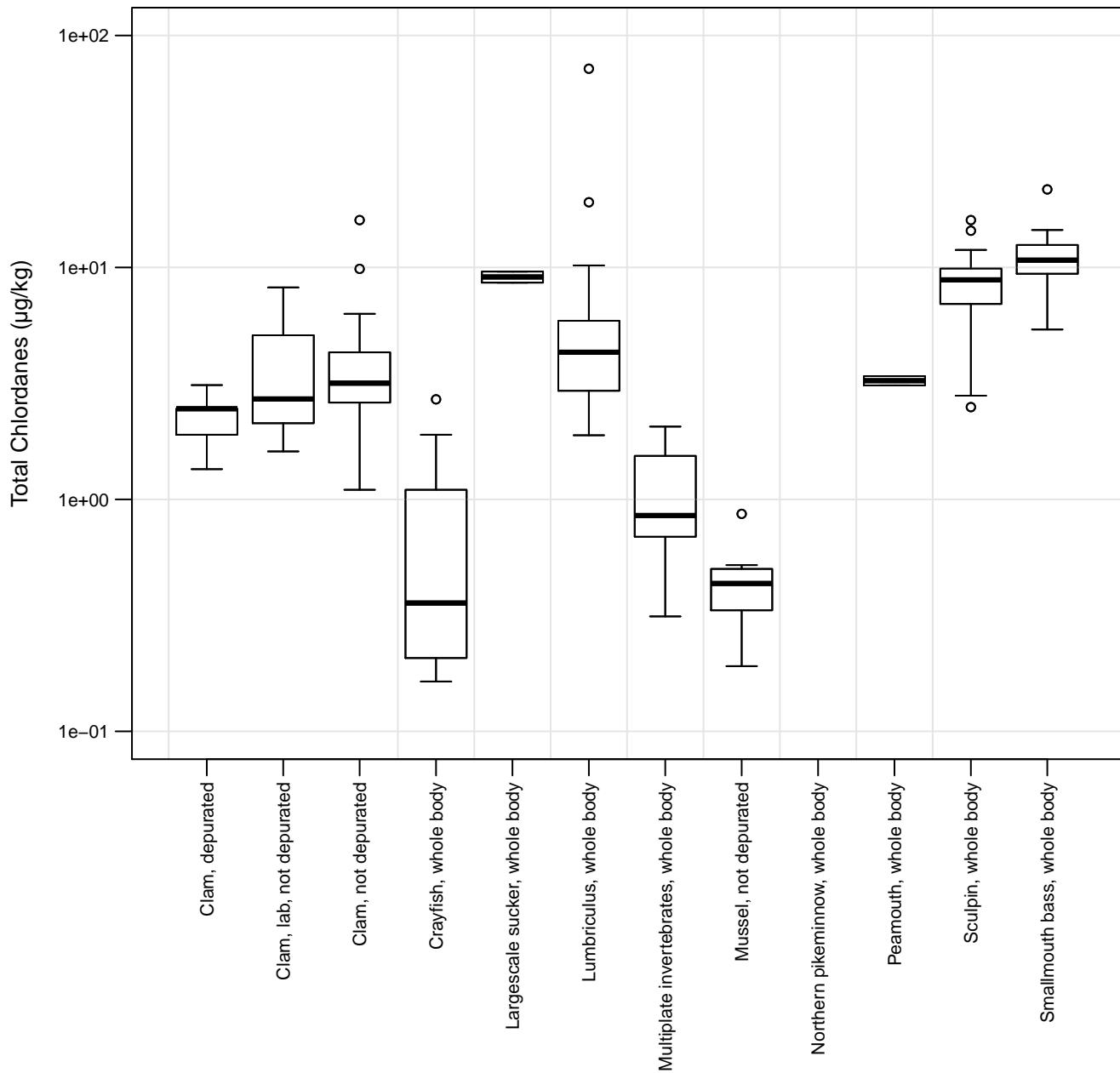


Figure 5.6-21
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 Total Chlordanes in Biota (RM 0.8–12.2)

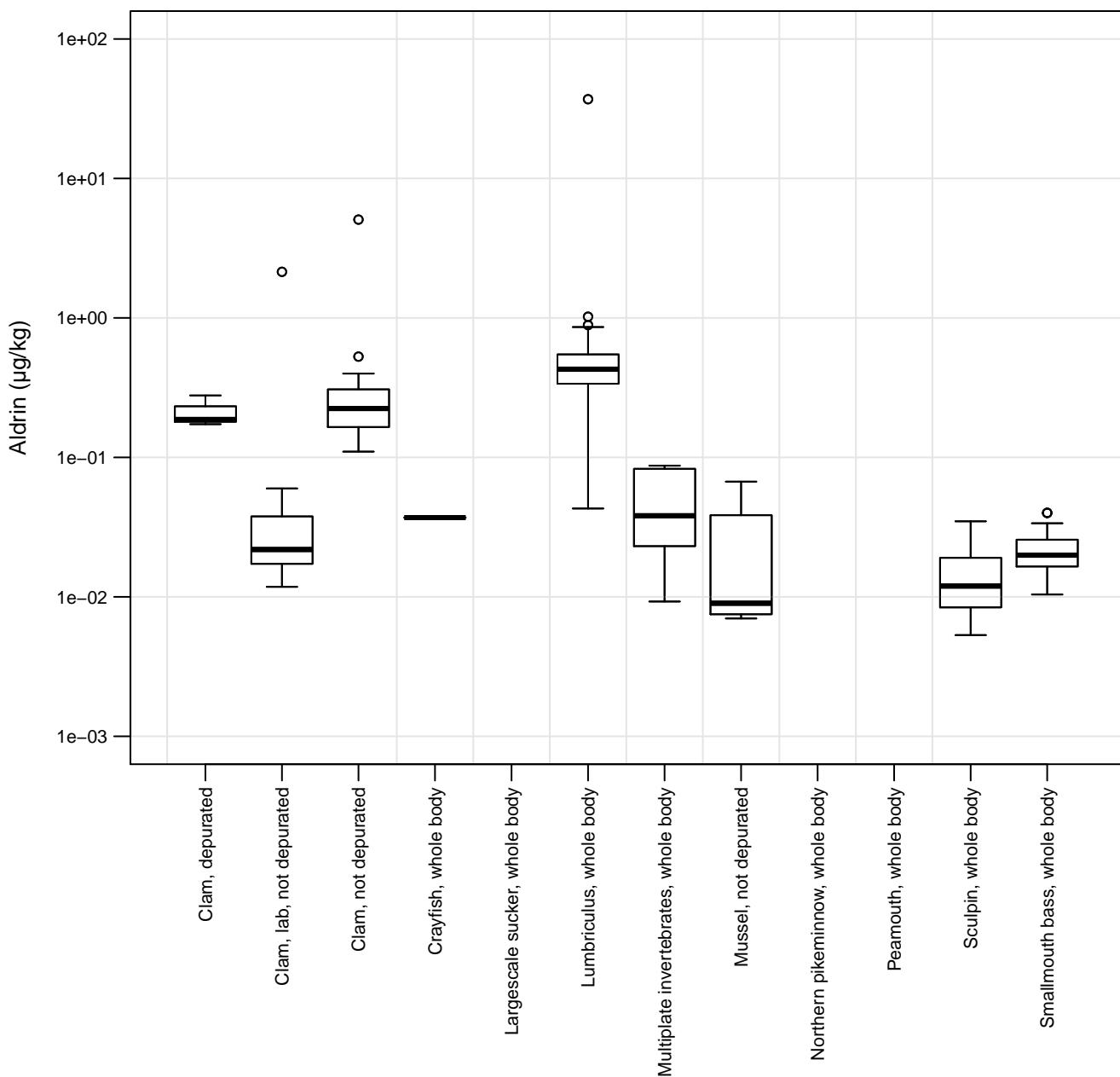


Figure 5.6-22
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 Aldrin in Biota (RM 0.8–12.2)

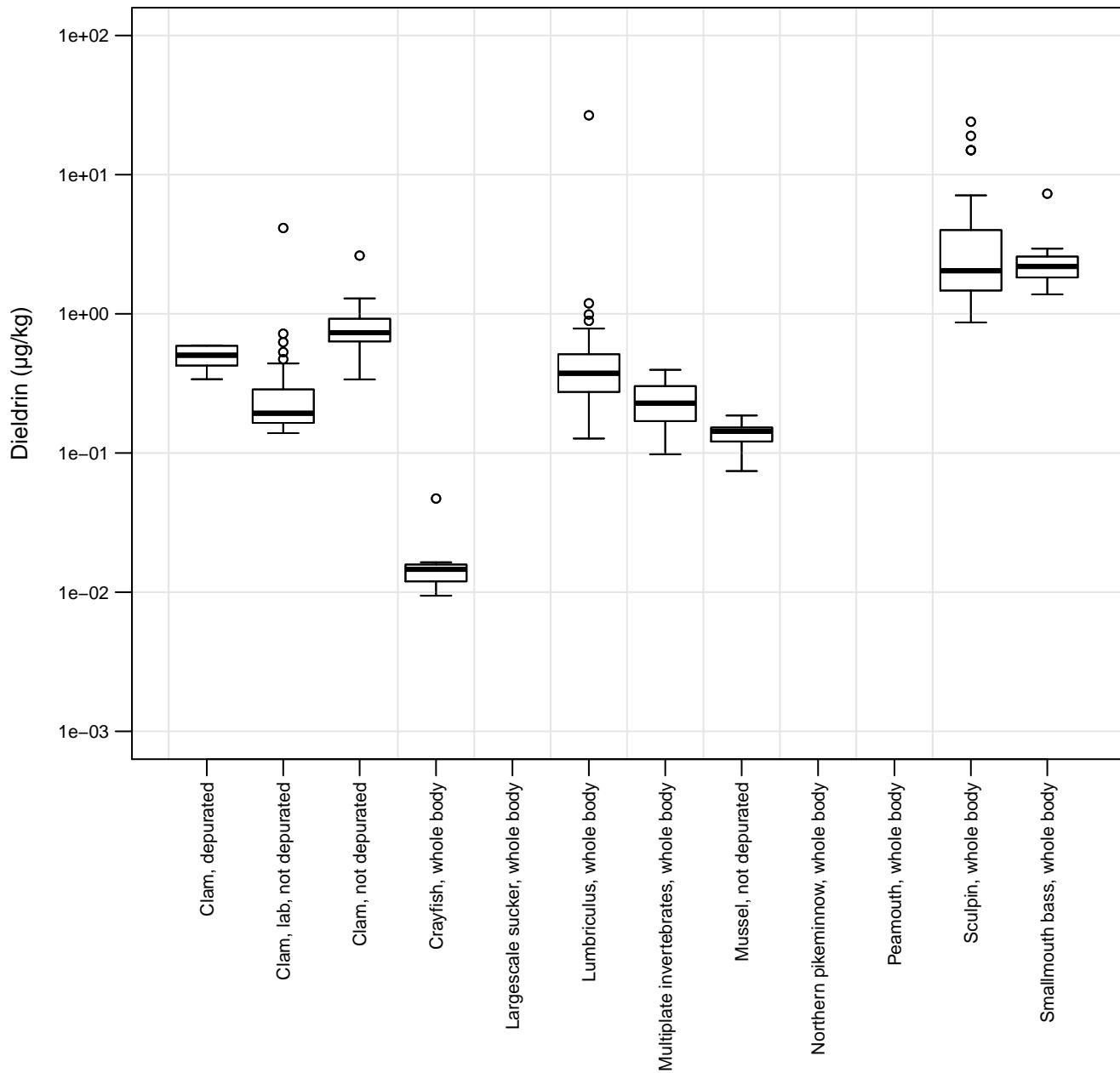


Figure 5.6–23
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 Dieldrin in Biota (RM 0.8–12.2)

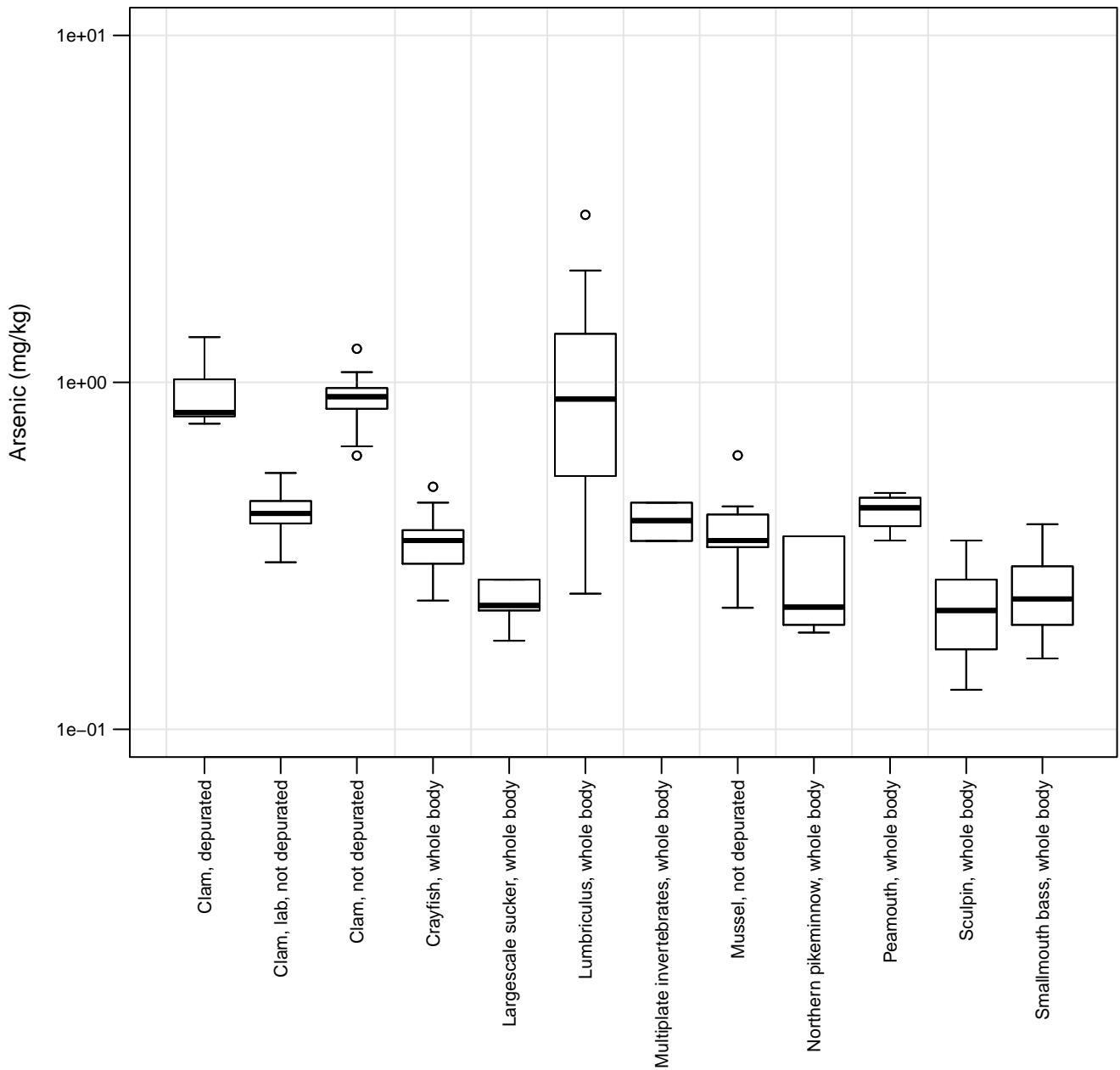


Figure 5.6–24
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Detected
Arsenic in Biota (RM 0.8–12.2)

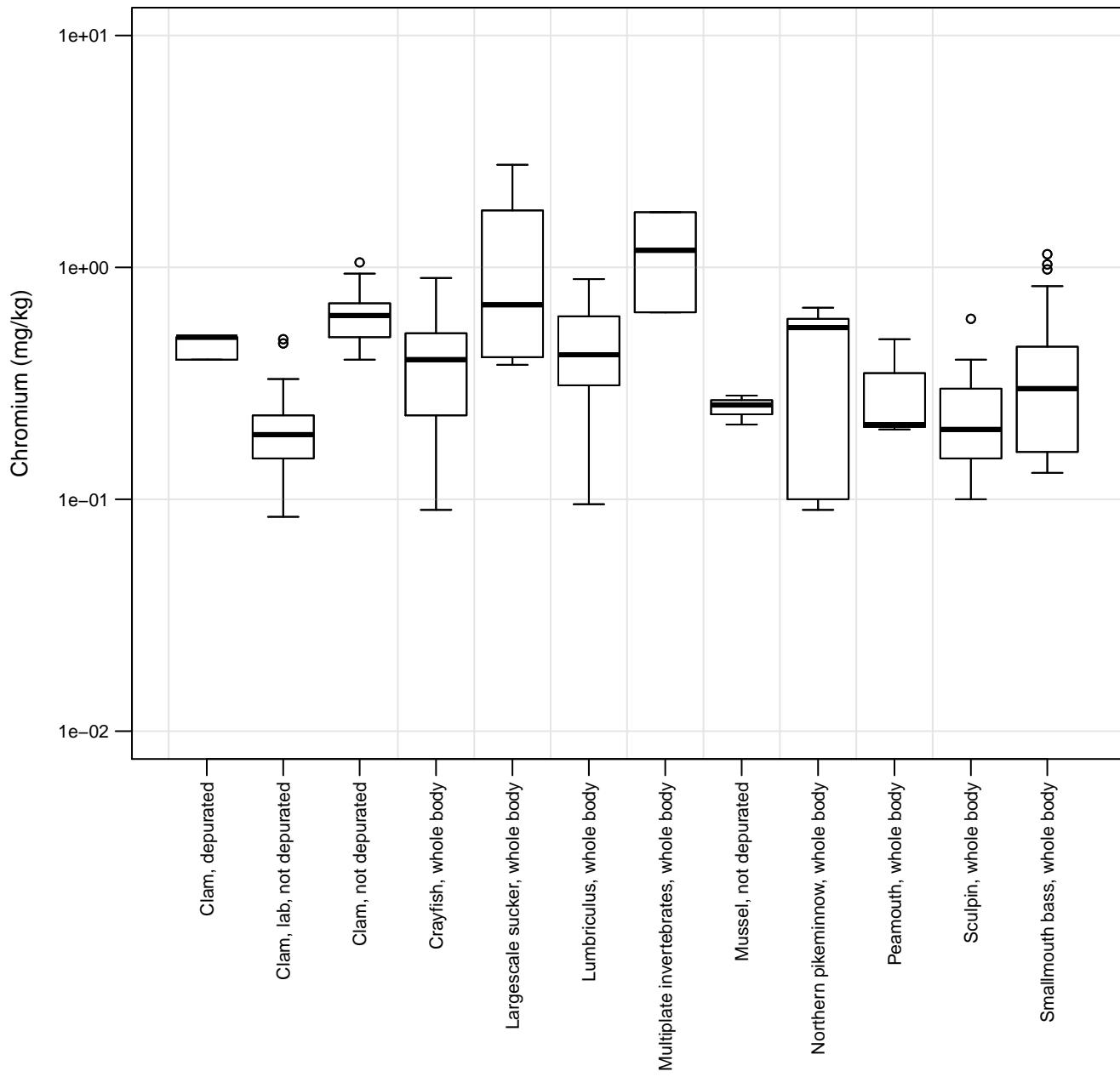


Figure 5.6–25
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 Chromium in Biota (RM 0.8–12.2)

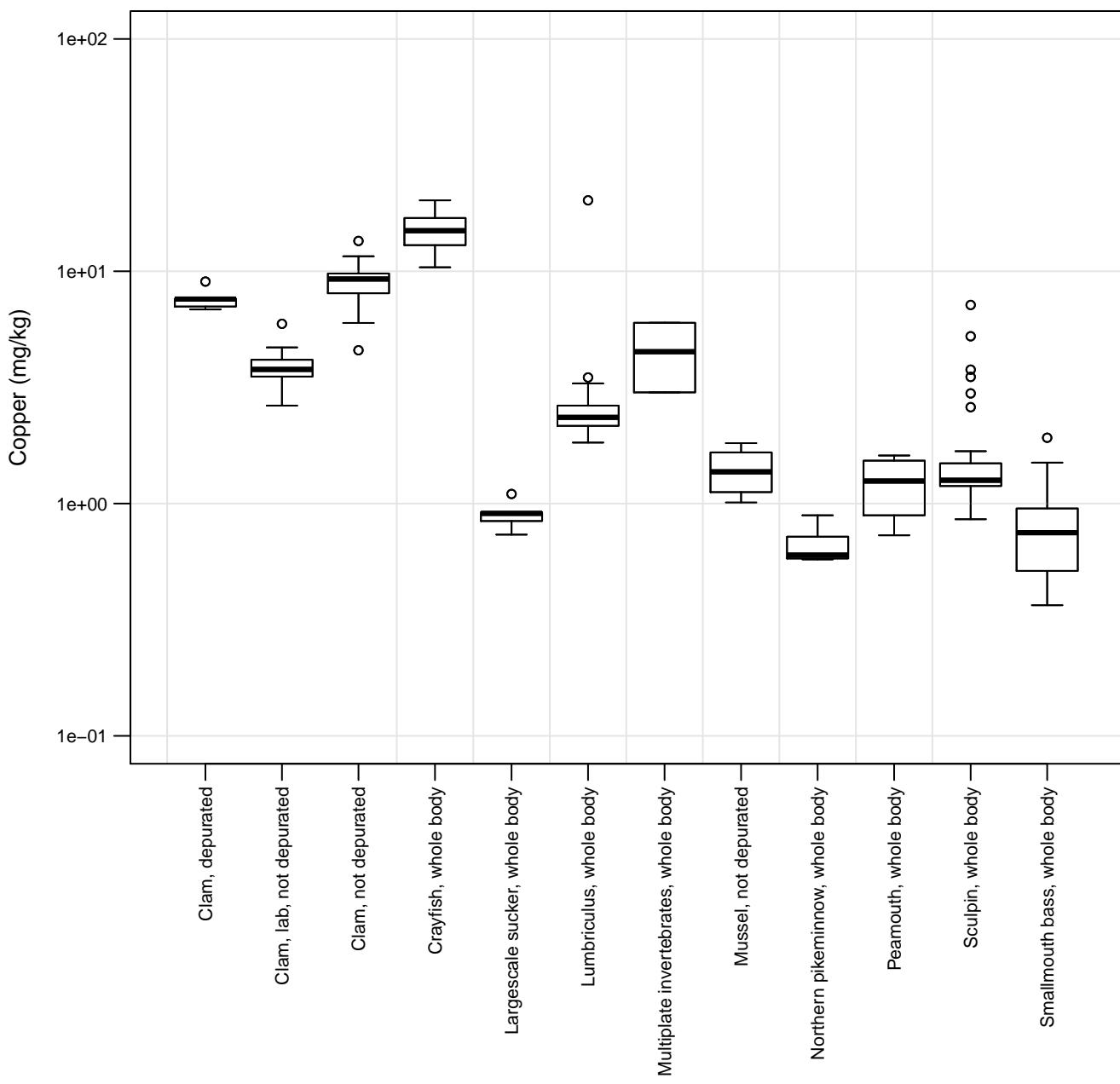


Figure 5.6–26
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 Copper in Biota (RM 0.8–12.2)

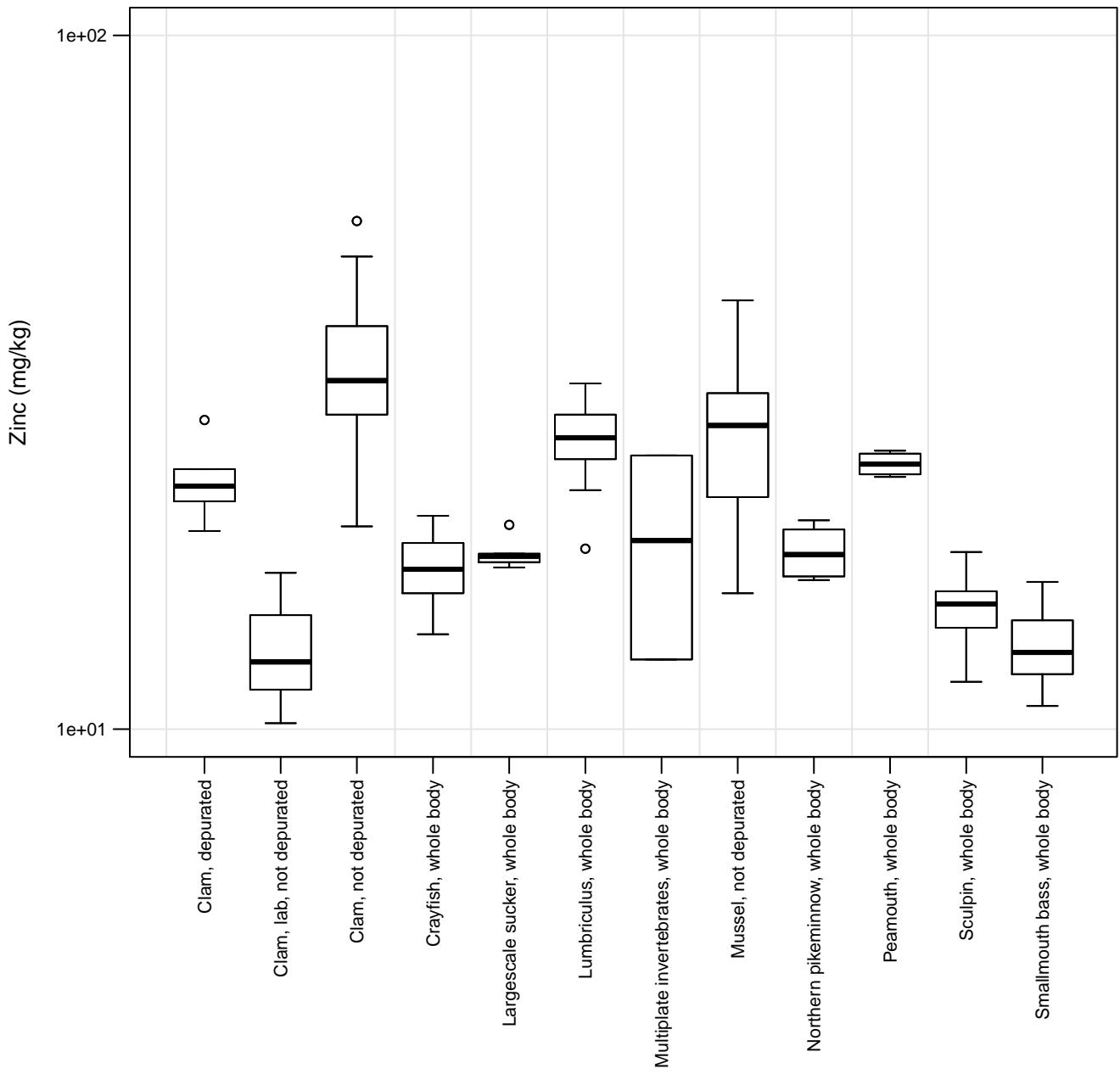


Figure 5.6-27
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected Zinc
 in Biota (RM 0.8–12.2)

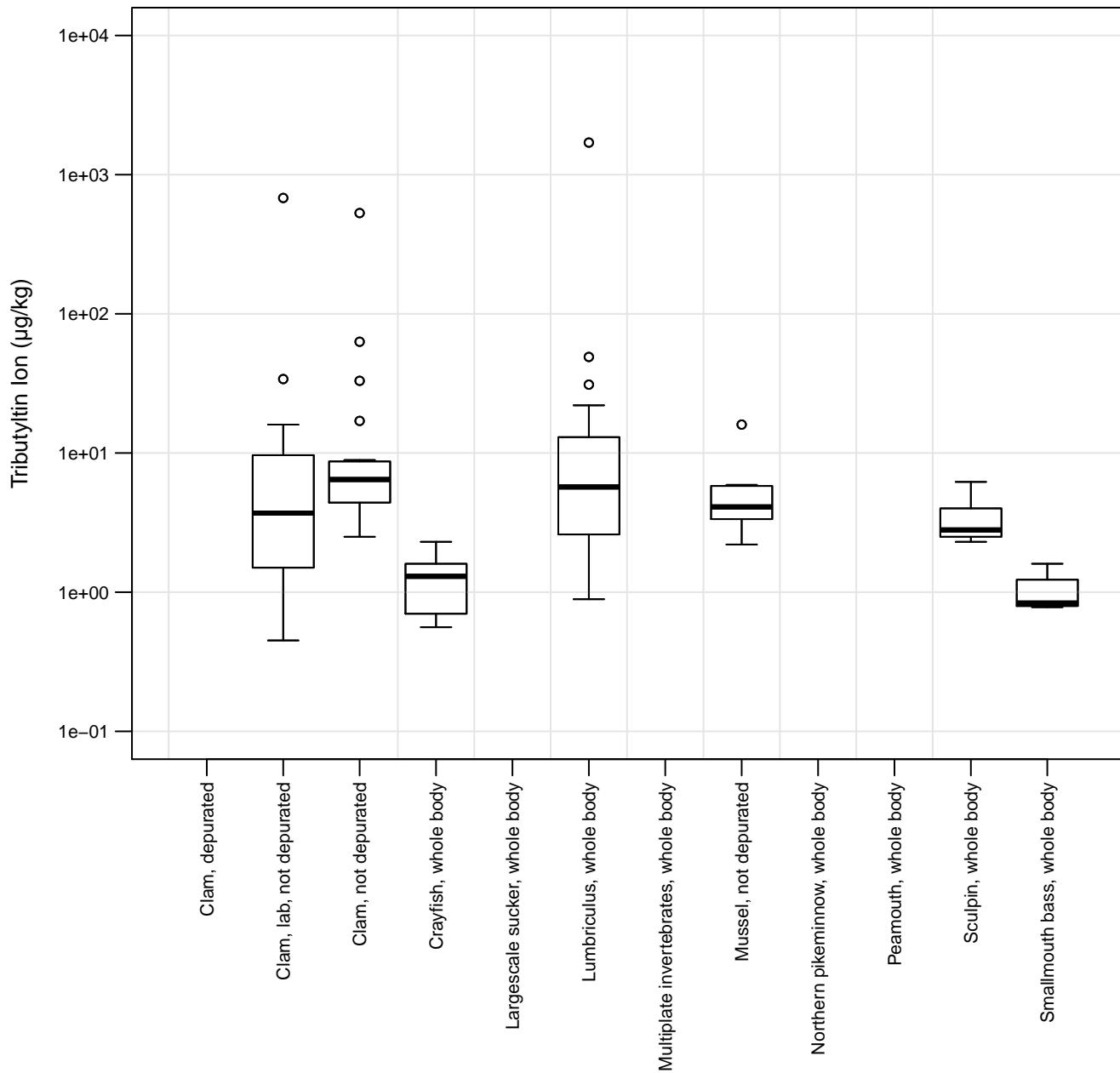


Figure 5.6–28
 Portland Harbor RI/FS
 Remedial Investigation Report
 Box-Whisker Plot of Detected
 Tributyltin Ion in Biota (RM 0.8–12.2)